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HISTORY OF INDIAN MEDICINE



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HISTORY OF INDIAN MEDICINE

Containing Notices, Biographical and
Bibliographical, of the Ayurvedic
Physicians and their Works on Medicine

From the Earliest Ages to the Present Time

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by

Girindranath Mukhopadhyaya, Bhisagacarya
B.A., M.D., F.A.S.B.

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Volume I



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**To
The Memory
of
My Mother**

WORKS BY THE AUTHOR

1. The Surgical Instruments of the Hindus,
With a Comparative Study of the
Surgical Instruments of the Greek,
Roman, Arab and the Modern European
Surgeons. Griffith Prize Essay for 1909.
Published by the Calcutta University,
in two volumes. Vol. II. contains
about 400 illustrations
2. Tropical Abscess of the Liver.
Thesis approved for the Degree of
Doctorate in Medicine, Madras Univer-
sity. Published by the Calcutta Uni-
versity
3. Muscles of the Human Body, arranged in
tabular forms. Fourth Edition
4. The History of Indian Medicine containing
Notices, Biographical and Bibliographi-
cal, of the Āyurvedic Physicians and
their Works on Medicine. Griffith
Prize Essay for 1911. In four volumes.
Calcutta University publications.
5. Glossary of Indigenous Medicinal Plants.
6. Medicine in the Atharva Veda.

7. Medicine in the Vedic Times.
8. Lathyrism or the Khesāridāl Poisoning (In
9. Some Human Parasites as mentioned in
the Atharvaveda
10. Treatment of Syphilis

FOREWORD

An adequate history of Indian Medicine has yet to be written, though the importance of the subject has been acknowledged by eminent authorities. Professor Max Neuburger of the University of Vienna records the opinion that "the medicine of the Indians, if it does not equal the best achievements of their race, at least nearly approaches them, and owing to its wealth of knowledge, depth of speculation and systematic construction, takes an outstanding position in the history of oriental medicine. Thanks to the inexhaustible fount of Sanskrit Literature, its development can be traced in outline at any rate from its primeval origins in empiricisms and theurgy to its height as a completed system of learning." (Neuburger: *History of Medicine*, translated by Playfair, Vol. I, p. 43.) It needs no elaborate argument to establish that this "inexhaustible fount" requires for its complete exploration an army of scholars; and till this has been achieved, summaries of the history of Indian Medicine must continue to be incomplete and fragmentary. We cannot consequently express surprise

when we find that Neuburger in his great work devotes only 18 pages to the subject, while Professor Buck of Columbia in his work on "the Growth of Medicine from the earliest times to the end of the 18th century" contents himself with a few paragraphs which occupy 8 pages only. In these circumstances, it is no wonder that the topic is not even mentioned in the brilliant lectures on "the Evolution of Modern Medicine" delivered by Sir William Osler at the Yale University in 1913.

I have stated enough to establish the importance of the work undertaken by Dr. Girindranath Mookerjee. In 1909 the University awarded him the Griffith Memorial Prize for the encouragement of advanced study in Science and Letters, on his valuable thesis dealing with the Surgical Instruments of the Hindus. This work has already been published in two volumes and its merits have been widely recognised. In 1911 the University again awarded the Griffith Prize to Dr. Mookerjee for his exhaustive thesis entitled "Notices, Biographical and bibliographical of the Indian Physicians and their works on Medicine." This was followed in 1913 by a thesis on "the Science of Medicine in the Atharva Veda," which participated in the award for that year. The materials thus collected are of immense value and will occupy several volumes. The financial difficulties

of the University have led to an unfortunate delay in the publication of the work and it is a matter for congratulation that the first volume will now be in the hands of scholars. The subsequent volumes are in the press and will be issued as rapidly as circumstances permit.

ASUTOSH MOOKERJEE.

The 28th February, 1923.

PREFACE

The first volume of the History of Indian Medicine is now offered to the public. It is now many years since I undertook and completed the book. I submitted it as a thesis for the Griffith Prize for original research : " Notices Biographical and Bibliographical of the Âyurvedic Physicians and their Works on Medicine." It was commended and the prize was awarded in 1911. I regret that so long a time has elapsed in the publication of the book. During the last few years there have been advances in the study of history of medicine. Consequently in this edition, not only has the revision been exhaustive, but many portions have been entirely recast and largely re-written. While this volume represents data and conclusions drawn from individual research, it is at the same time largely indebted to the works of others. References have been given to all the authorities and original sources as far as possible.

I may at once disclaim all pretensions to scientific treatment of my subject. I crave the indulgence of the readers for many shortcomings of the work. The writer is not master of his time, and the incessant engagements of his practice leave little leisure for literary works.

To render the finding of any particular subject easy to the reader, I have enlarged the table of contents. The general index, which will be given at the end of the work, will facilitate references.

Before concluding this preface, I tender my thanks to the Vice-Chancellor of the Calcutta University,

Sir Asutosh Mookerjee, for assistance of the utmost value in the preparation and publication of this volume. In fact, it might have been deferred much longer if I had not secured his valuable assistance. I have also to express my gratitude to him for his kindness in writing a foreward to this volume.

156, HARIS MUKERJEE ROAD,
BHOWANIPUR, CALCUTTA.
1st March, 1923.

G. N. MUKERJEE

As regards the transliteration of Sanskrit words, we have employed the method adopted in the Congress of Orientalists and circulated in the Journal of the Royal Asiatic Society, ignoring in fact, the unpleasant characters of the Sacred Books of the East.

I

SANSKRIT AND ALLIED ALPHABETS,

अ a	ओ o	ट t	ब b
आ ā	औ au	ठ th	भ bh
इ i	क k	ड d	म m
ई ī	ख kh	ढ dh	य y
उ u	ग g	ण ṇ	र r
ऊ ū	घ gh	त t	ल l
ऋ ṛ	ड ṇ	थ th	व v
ॠ ṝ	च c	द d	श ś
ऌ ḷ	छ ch	ध dh	ष ṣ
ॡ ḹ	ज j	न n	स s
ए e	झ jh	प p	ह h
ऐ ai	ञ ñ	फ ph	ळ l

* (Anusvāra) ṁ

° (Anunāsika) ṁ̄

: (Visarga) ḥ

× (Jihvāmūliya) ḥ̄

× (Upadhmanīya) ḥ̄

s (Aragraha) ,

(Udātta) ˆ

Svarita ˘

Anudātta ˙

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CONTENTS

	PAGE
Introduction	1-169
The number of Sanskrit medical works. Brief survey of the work done by scholars. The neglect of Europeans. Importance of the study of History of Indian medical literature. Every chapter has as its heading the name of the physician whose life is described. It is an index of Sanskrit medical works. Study of history of medicine in Europe. Notes of some works on the history of medicine. Decline of historical research in Europe. Recent publications. The study of History of Medicine in England. Medical Biographies and History. Revival of the study in Europe. History of Medicine as a study in India. Translation of Suśruta Saṁhitā. Sanskrit medical books. A medical man should have wide culture. Recommendations of the Calcutta University Commission for the establishment of Chairs of History of Medicine and Pharmacology. The importance of the study of Medical history : 1. Best method of popularising scientific studies ; 2. Educational aspect ; 3. Necessary for research	

4. Attractions for the study; 5. Useful pastime for busy practitioners. Side-lines of physicians. The utility of study: I. Origin of medicines; (i) Gods, (ii) Animal instructors of medicines; II. Accounts of obsolete customs (i) Viṣa-kanyā or poison-girls, (ii) Śuka-doṣa, (iii) Temple Sleep; III. Therapeutic measures, (i) The immovable apparatus and rattan cane splints in fractures, (ii) Massage, (iii) Hypnotism, (iv) Exercise. IV. Indigenous drugs. V. Identification of diseases, (i) Leprosy, (ii) History of Cholera or Visūcīkā; Small-Pox, Vaccination, Inoculation and vaccination, Śitalā; Syphilis. The methods of popularising the study of medical history: 1. Museums, 2. Exhibition, 3. Library, 4. Pictures	1—169
Appendix	170-172
Notices, Biographical and Bibliographical, of the Āyurvedic Physicians and their Works on Medicine :	

CHAPTER I

Brahmā, the originator of the Science of Life. His Āyurveda consisted of Śalya Tantra or Major Surgery, Śālākya Tantra or Minor Surgery, Kāya Cikitsā or Medicine, Bhūtvidyā or Demnology, Kumārabhṛtya the Science of Pædiatrics, Agada Tantra or Toxicology, Rasāyana or the

CONTENTS

xix

PAGE

Science of Tonics, and Vājīkarapa Tantra or the Science of Aphrodisiacs. The Divine origin of medicines in Egypt, Greece and other ancient countries. Mss. of Āyurveda. References to Brahmā. His works. Formulæ attributed to Brahmā. His disciples	1—17
Viṣṇu, the Preserver; the Sun-god. Reference to Viṣṇu as a physician. Formulæ ascribed to Viṣṇu	18—27
Śiva, the propounder of the Science of Medicine. Rudra, Tavamvaka. Who is Rudra? His names. His works. References to Rudra as a physician in the Vedas. Formulæ ascribed to Śiva. Serpent worship. Snake the symbol of wisdom	28—82

CHAPTER II

Bhāskara or the Sun. Bhāskara as a physician in the Rgveda. Birth of the Aśvin twins. Bhāskara is the god of the eyes. Books and Formulæ ascribed to him. References to Sūrya and Savitā in the Rgveda	83—98
Indra as described in the Vedas and Purāṇas. He learned Medicine from the Aśvins. His disciples. Ātreya and Bharadvāja. Reference to Indra as a physician. Incidents of Indra's life. The hymns to Indra in the Rgveda. The skill of Indra as a physician. Formulæ ascribed to him	99 110
Kārtikeya. His works	111

Sarasvatī as a river and as the goddess of learning. Bhārati and Ilā. Formulae ascribed to Sarasvatī. The hymns to Sarasvatī in the Ṛgveda	... 112—119
Rākā, Sinīvālī, Guṅgu and Anumati	... 120—121

CHAPTER III

Dakṣa the Prajāpati. He is the creator of living beings. Genealogy of the teachers of medicine. Dakṣa and Æsculapius. Formulae ascribed to Dakṣa	... 122—124
Yama the ruler of the dead. His character in the Veda and the Mahābhārata. Books written by him. Hymns to Yama in the Ṛgveda	... 125—128
Varuṇa the god of the ocean. Mitra and Varuṇa in the Ṛgveda. Varuṇa's medicines. Varuṇa and Oannes the Sumerian deity. The epithets of, and hymns to Varuṇa in the Vedas.	... 129—133
The Aśvini-kumāra the twin sons of Vivasvat and Saranyā. Nāsatya and Dasra. Descriptions of the Aśvins in the Ṛgveda. Resemblance to Chiron the Centaur, and to Castor and Pollux. The Mitanian Gods. Incidents of their life. Hymns to Aśvins in the Ṛgveda. References to Aśvins as medical men in the Ṛgveda, Caraka Saṁhitā, and Suśruta Saṁhitā. The epithets applied to them in the Ṛgveda. Their works. Formulae ascribed to the Aśvins	... 134—177

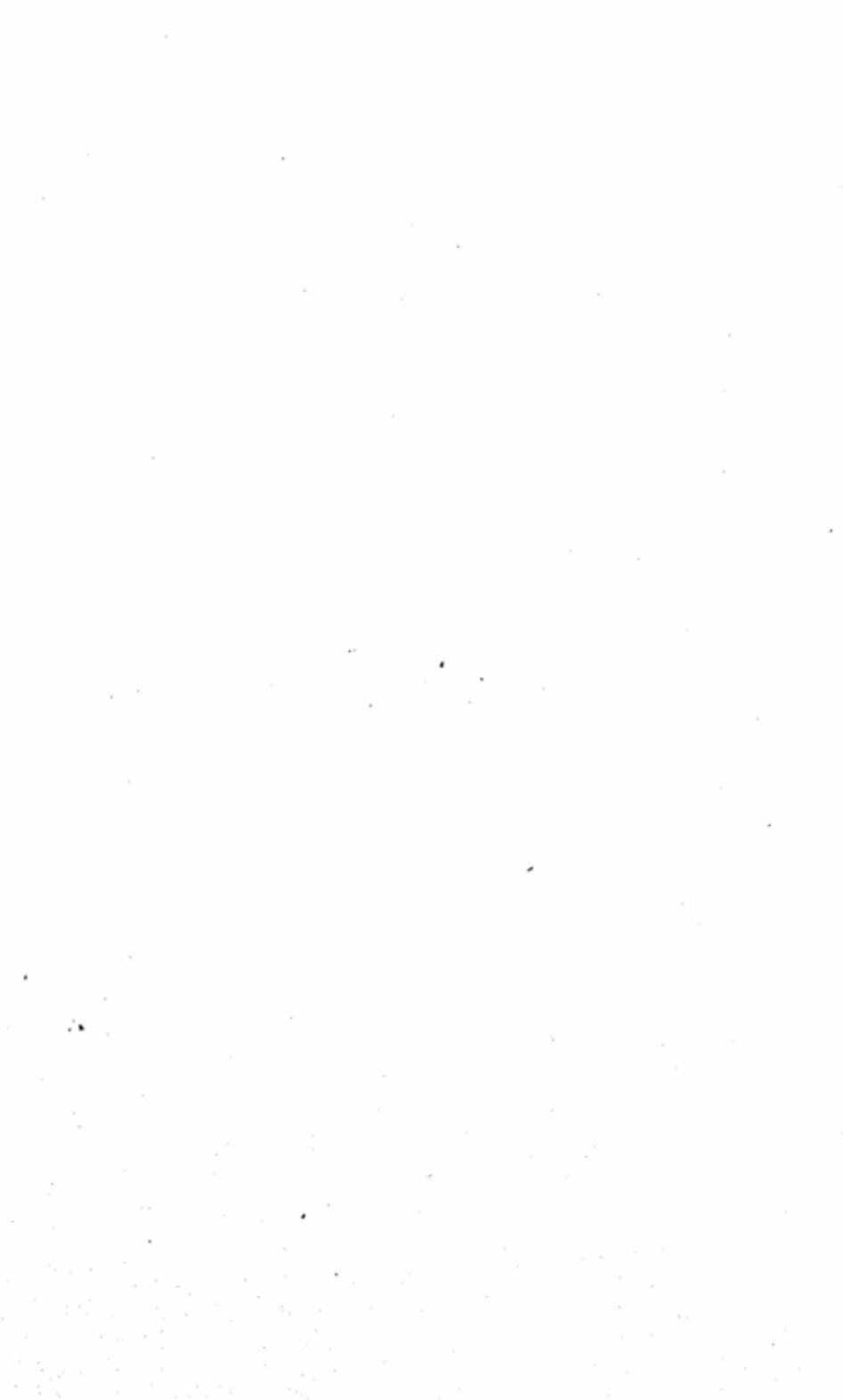
CONTENTS

xxi

PAGE

CHAPTER IV

Kaśyapa. Reference to Kaśyapa. Formulæ ascribed to him	178—180
Kāsyapa the Elder. References to him in medical texts. Formulæ ascribed to him. His works	181—188
Soma in the R̥gveda. Identification of the Soma plant. Manufacture of Soma juice. Properties ascribed to Soma juice. Soma as god. His divine powers. His wives. References to Soma as a god in the earlier hymns in the R̥gveda. The dual character of Soma. The hymns in the R̥gveda which treat of Soma	189—204



INTRODUCTION



INTRODUCTION

Weber, in his *History of Indian Literature*,¹ remarks: "The number of medical works and authors (in Sanskrit literature) is extraordinarily large. The former are either systems embracing the whole domain of science, or highly special investigations of single topics, or lastly, vast compilations prepared in modern times under the patronage of kings and princes. The sum of knowledge embodied in their contents appears really to be most respectable. Many of the statements on dietetics and on the origin and diagnosis of diseases bespeak a very keen observation. In Surgery, too, the Indians seem to have attained a special proficiency and in this department European surgeons might perhaps even at the present day still learn something from them, as indeed they have already borrowed from them the operation of rhinoplasty. The information, again, regarding the medicinal properties of minerals (especially precious stones and metals), of plants, and animal substances, and the chemical analysis and decomposition of these, covers certainly much that is valuable. Indeed, the branch of *Materia Medica* generally appears to be handled with great predilection, and this makes up to us in some measure at least for the absence of investigations in the field of natural science. On the diseases etc. of horses and elephants also there exist very special monographs." Dutt says:² "The number of Sanskrit medical works, and especially of small compilations on the treatment of diseases, is too numerous and

¹ Pp. 269-70.

² *Materia Medica of the Hindus*, Preface, p. vii.

indefinite to admit of detailed enumeration here. The enquirer after them is sure to find, in different parts of the country or seats of learning, many little manuals, essays and digests of which he did not hear before. It would seem that in the absence of printing, teachers of medicine used to prepare small compilations containing such prescriptions as they were in the habit of using, for the guidance of their pupils, who copied them for personal use." When writing on medical authors and their works in my thesis "The Surgical Instruments of the Hindus,"¹ we noted that, besides the principal authors and original works mentioned therein, "the number of Sanskrit medical works is simply legion; many of them are daubed with fancy names and are excellent treatises on the different branches of medical science. I intend to publish in a separate volume short notices of the medical authors and their works and so we need not dwell on them here." The desire which I have long entertained of contributing to the History of Indian Medicine has now been realised, and the present attempt is to fulfil the promise made a few years before.

In performing this duty I have endeavoured to embody my researches in a connected form, but I have not been inattentive to the works of other enquirers. It would be, no doubt, interesting to take a brief survey of the work done by scholars as regards our knowledge of Ayurvedic authors and their works. Prof. Wilson² wrote on the early medical authors. Royle³ proved the originality of the Hindu medicine. His arguments for antiquity of Hindu Medicine are deservedly styled as epoch-making researches. Dietz

¹ Vol. I, Introduction, p. 33.

² Oriental Magazine, Calcutta, February and March, 1823.

³ Royle: An Essay on the Antiquity of Hindoo Medicine, 1837.

has given in his *Analecta Medica* a long abstract from Ibn Osaibe's biographical work, on the Lives of Indian Physicians. In Ainslie's *Materia Medica*, some of the medical treatises are mentioned. In Wise's *Commentary*¹ we find a list of the Hindu writers on medicine and their works. In Weber's *History of Indian Literature*, we have a few pages on the medical texts of the Hindus. Cordier's *Recientes Decouvertes*, Vāgbhaṭa and other contributions supply many informations on the subject. Dutt in the preface to his *Materia Medica of the Hindus* described some of the important works, and similarly we find them described by the Thacore Saheb,² in his *History of Aryan Medical Science*, with an important bibliography at the end. Roth's monograph on Caraka and the notices of medical authors in *St. Petersburg Dictionary*³ supply us with important details. A more systematic description of the authors and their works, we find in Jolly's *Medicine in the Encyclopædia of Indo-Aryan Research* (Grdr.). Hoernle's contributions "The Commentators of the *Suśruta Saṁhitā*," and "The Ancient Medical Authors" in his *Osteology*, and his magnificent edition of the Bower MS., are invaluable aids to our study. The notices of the authors in Ray's *History of Hindu Chemistry*,⁴ and the preface in Kunte's *Vāgbhaṭa* are repositories of useful informations on the ancient medical literature. In the *Vanaśadhi Darpaṇa*, Kavirāja Virajācaraṇa Gupta, gives us an elaborate list of *Āyurvedic* books in Bengali, the important works being described in detail. I have also availed myself of his contributions in

¹ Wise : *Commentary on the Hindu System of Medicine*, 1845 :

² Chapter II, *Ancient Writers on Hindoo Medicine*.

³ *Supplement*, Vol VII, *Medical Authors*.

⁴ J. R. A. S. 1907.

his Account of the Principal works of the Atreya School of Medicine. Many MSS. are noticed in the catalogues of Sanskrit works ; and I have derived special help from L. I. O. Cat., Nepal Cat., Bik. MSS., Oxf. Cat., Cat. Cat., G. O. M. L. Cat., etc., as these contain descriptions of various MSS. ; and I take this opportunity of acknowledging my indebtedness to Mitra, Śāstri, Bhāndārkar, Aufrecht and others. It is more than probable that I may have failed to refer to some contributions which ought to have been mentioned, but I am confident that my sins of omission have not been numerous. It has been my earnest desire to omit nothing of importance. A sufficient acknowledgment of the source of the literature that has been laid under contribution will be found in the index of the authors quoted.

The European scholars had a preconceived notion that the ancient Sanskrit medical books contained little or nothing that was original. Thus we find that though the other branches of Sanskrit learning were vigorously ransacked by their critical judgment, the Hindu science of medicine received little or no attention. Dutt says :¹ " The Hindu medical science unfortunately received less attention from the earlier antiquarians than the other Indian Sciences and the facts collected even up to the present date are not nearly exhaustive." Even Sir William Jones, a savant with whom it would be impossible to name any other in the same breath in oriental scholarship, did not think it worth while to examine the Sanskrit medical books critically. He says : " What their old books contain on this subject, we ought certainly to discover, and that without loss of time ; lest the venerable but abstruse language, in which

INTRODUCTION

५

they are composed, should cease to be perfectly intelligible, even to the best educated natives, through a want of powerful invitation to study it. Bernier, who was himself of the Faculty, mentions approved medical books in Sanskrit, and cites a few aphorisms, which appear judicious and rational; but we can expect nothing so important from the works of Hindu and Muselman physicians, as the knowledge, which experience must have given them, of simple medicines."¹ Later on he complains: "I have no evidence, that, in any language of Asia, there exists one original treatise on medicine considered as a science: physick, indeed, appears in these regions to have been from time immemorial, as we see it practised at this day by Hindus and Muselmans, a mere empirical history of diseases and remedies; useful, I admit, in a high degree, and worthy of attentive examination..... We still have access to a number of Sanskrit books on the old Indian practice of physick, from which, if the Hindus had a theoretical system, we might easily collect it." He concludes: "On the whole, we cannot expect to acquire many valuable truths from an examination of eastern books on the science of medicine; but examine them we must, if we wish to complete the history of universal philosophy, and to supply the scholars of Europe, with authentic materials for an account of the opinions anciently formed on this land by the philosophers of Asia."² Even now, after an interval of a century, similar remarks are made by learned men. Willoughby³ in his *History of Medicine*, writes: "It would be useless, were it possible, to discuss in this place the medicine of India and China, which has no

¹ The works of Sir William Jones, London, 1799, Vol. I, p. 12.

² *Ibid*, Vol. I, pp. 161-62.

³ *Encyclopaedia Medica*, Vol. 7.

direct interest to us." This need cause no surprise, for the majority of medical men practising in India are ignorant of Sanskrit language in which the ancient medical books are written and the exigencies of a lucrative practice have left them without inclination for the requisite study. But it must be acknowledged that it is not impossible for a surgeon or physician to become an active contributor to the literature of the profession. The renowned Adams was only a village surgeon. The scholars, on the other hand, having no knowledge of medicine, may have been prevented by lack of the necessary materials from carrying out adequate researches. Thus we find that even modern scholars are not unanimous as regards the remote origin of the science. Whitney¹ says : "The medical science, although its beginnings go back even to the Veda, in the use of medicinal plants with accompanying incantations, is of little account, and its proper literature by no means ancient."

The study of the ancient books is very important in the construction of the history of Hindu medicine. "The history of medical literature forms a very large part of medical history. If we open a standard history of medicine, it may seem in some parts as if it were little else than a history of books. One feels that this is not quite just, as books contain but a small part of medical activity through all the ages. The author of a medical book is not necessarily a fair representative of his class. He may have been superior to the average. On the other hand, the mere fact that what he wrote has survived does not show him to have been a greater physician than others of his contemporaries who wrote nothing, or whose works are lost. Nevertheless since books are in the end more

¹ Introduction to Whitney's Sanskrit Grammar, p. xxii.

enduring than wrought metal or sculptured stone, medical writings are sometimes the only evidence we have of the state of medicine during long tracts of time."¹ It is only from a diligent research into the Sanskrit books that we can expect to become acquainted with the medical science and learning of the ancient Hindus.

The Sanskrit medical books still exist in manuscripts which lie scattered here and there. Only a few important books have been edited and published; and there are numerous compositions, either treating of the whole system or of separate topics, that bear a character of more or less weight. One or two books only have been translated in English in recent times. So practically these works are still sealed books to the world, and the historians of medicine make no room for the study of Indian medicine in their works. Royle says: "Considerable as appears to have been Hindoo medicine and extensive as no doubt has been the influence of its *Materia Medica*, the absence of all of the former in the annals of medicine, can only be accounted for from the geographical position of India with respect to Europe, and the total unacquaintance with the refined language of the former, which prevailed in the latter even to our own day. For when the name of even the most celebrated Hindoo writer presented itself before a modern author writing expressly on the subject, it is passed over without comment or examination—'Scharak Indus, a Rhazeo citatus plane ignotus' (Sprengel. *Hist. Rei. Herb.* 1, p. 234). That a Hindoo system of medicine does exist, we know from their numerous books on all branches of that science; that some of these were written prior to the Arabs, we have shewn by their being quoted in the works of the latter. How much earlier than the

¹ Payne: *English Medicine in the Anglo-Saxon Times*, p. 10.

² Royle: *Antiquity of Hindoo Medicine*, pp. 74-75.

eighth century the principal of them were composed, we may only hope to ascertain by the progress now making in settling Indian Chronology. But in absence of this it is practicable, as I have stated, to get a conviction of the cultivation of medicine among the Hindoos at still earlier periods, from occasional notices by writers of the West; and we cannot but allow them an early knowledge of the properties of many of the valuable drugs which their country afforded them, when we see the necessarily subsequent employment of the same by the Greeks and Romans." It is unfortunate that even the names of Sanskrit authors and their works are generally unknown to scholars. To supply this want I have collected the notices of the authors and their works from various sources, of which it is impossible to detail a list. The ages in which they lived are shrouded in obscurity and mystery, and nothing like a chronological arrangement was ever attempted. Their birth-place, parentage, or education have eluded research, and little is known of the time of their birth. We learn little concerning many eminent physicians except that they are quoted occasionally in text-books, commentaries, annotations, and glosses. Of the incidents of their personal lives we have no record. Where they lived and practised are all unknown to us. The chronological relations of the authors, which I have attempted in this work, must not be taken as settled facts in the history of literature; they are only landmarks in a vast unexplored area, which may be of some help to travellers on these lines. The present work can lay no claim to finality, the chronology must for the present be found somewhat tentative. It is a brief survey over the whole field which begins with the early dawn of Hindu civilisation, the age of the R̥gveda to the present time. The arrangement of the authors might in some

places seem arbitrary, but on close inspection it would be found that it was the only alternative left to the writer from the references to authors quoted in books, in the absence of any authentic account of their lives.

In the history of medical science every chapter might have as its heading the name of a great surgeon or physician, who as pioneer has determined and guided progress. We have adopted this plan in the present contribution. The design of the work is expressed in its title. The need for it, as a contribution towards a history of medicine, is proved by the fact that no work professing to cover the whole field of medical bibliography of Āyurveda has hitherto appeared in any language. How far I have succeeded in filling up the blank that exists in this department of medicine must be left to the judgment of the readers. I felt that it would be rendering useful service to scholars engaged in this field of research, if I could bring together the latest and the most complete information, which is diffusely recorded in the transactions of learned societies, in journals, in monographs and in systematic treatises, in a form which would allow of ready and easy reference.

Again as an index of the Sanskrit medical works it would be invaluable to scholars in identifying the recently discovered MSS. of Indian medicine in different parts of the country. I am confident that MSS. of Sanskrit medical literature are still extant in different places in India and no time should be lost in organising a regular search for the Āyurvedic MSS. "The climate, and the materials of which these ancient works are composed, render them very liable to be destroyed. Some are already lost, and the difficulty of procuring correct copies of the remainder, is yearly increasing." (Wise.)

I now hand over my work to the learned public. I am fully cognizant of the very defective manner in which I

have treated the subject and conscious of the numerous imperfections and drawbacks which are plentifully abundant in its pages. I must however express a hope that, inspite of the many lacunæ and faults which cannot pass unheeded, it may induce others more capable of elucidating such a complex subject to devote their researches and investigations to it.

In the continent of Europe, the study of history of medicine had been continued with some zeal from the earliest times. In France, medical history has always a chair of its own at the Université; at Vienna, the practice seems to have been the same. The Germans cultivated this branch of medical science in the eighteenth century; and it used to be called a peculiarly German department of science. Even in ancient times, the study of history of medicine was not neglected. In the Hippocratic Collection, we have a treatise on "Ancient Medicine." Celsus's great work "*De Medicina*" is of the highest value as a history of medicine from the time of Hippocrates to his own days.

The first complete history of medicine was written by Sprengel. His "*History of Medicine*" appeared in successive editions in German and in a French translation from 1792 to 1828. There is no English translation of this important work. The book is now nearly out of date. Hecker's two works, published in 1822 and 1839, belong to a bygone age. So is Le Clerc's "*Historie de la médecine*," Genève, 1696, 8vo. Amast, 1723, 4to, which only continues the history till the age of Galen.

The most complete works and the best, because contemplating the history of medicine from the standpoint of modern science, are:—Haeser: *Lehrbuch der Geschichte der medicin und der epidemischen Krankheiten*. Jena, 3rd ed. 1875-79.—Daremborg: *Histoire des Sciences*

médicales, Paris, 1870.—Puccinotti: "Storia della medicina."—Bouchut: Histoire de la médecine et des doctrines médicales, Paris, 1872-3; it compares the ancient and modern schools of medicine.

For special periods, we have:—Wüstenfeld: Geschichte der Arabischen Aertzte und Naturforscher, Göttingen, 1840.—Lucien Le Clerc: Histoire de la médecine Arabe. Paris, 1876.—Darembert: L'Ecole de Salerne. Paris, 1861.—De Renzi: Storia documentata della Scuola medica di Salerno, 2nd Ed. Naples, 1857.—Collectio Salernitana, 5 vols. Naples, 1852.—Hirschel: Geschichte der Brown'schen Systems und der Erregungs Theorie. Leipzig, 1846.

"The historical investigation, like the geographical, had from the outset a dual character, in as much as it adopted either the chronological standpoint or the pathological" (Hirsch). Among the best known works belonging to the chronological class are:

Noah Webster: Brief History of Epidemic and Pestilential Diseases, 2 Vols., Engl. Ed., 1800.

Bascomb: A History of Epidemic Pestilences, from the Earliest Ages.

Schnurrer: Chronik der Seuchen. 2 Vols., Tübingen, 1823.

Villalba: Epidemiologia Española.

Ilmoni: Bidrag till Nordens Sjukdoms Historia.

On the Pathological side, we have:

Hensler: Vom abendländischen Aussatze, Hamburg, 1790, and Geschichte der Lustseuche. Altona, 1783.

Ozanam: Histoire médicale génér. et particul. des maladies épidémiques. 4 Vols., Paris, 1835.

Hecker: Ueber die Justinianeische Pest. Der Schwarze Tod in 14 Jahrhundert, Engl. transl. by Babington, Lond. 1833. Die Tanzwuth, Berlin, 1832. Der

englische Schweiss, Berlin, 1834. Die epidemischen Krankheiten der Jahre 1770-72.

Haeser : Lehrbuch der Geschichte der Medicin und der epidemischen Krankheiten, 1880-82.

Atlas Historique et Bibliographique de la Medicine composé de Tableaux sur l'Histoire d'Anatomie, de Physiologie, de l'Hygiene, de la Medicine, de la Chirurgie et de l'Obstetrique, etc., Paris, 1829.

There are also important works which treat of the doctrinal aspect of medicine :

Broussais : Examen des Doctrines Médicales et des Systemes Modernes de Nosologie, Paris, 1816.

Daremborg : La Medicine, Histoire et Doctrines, Paris, 1865.

Hirschel : Geschichte der Medicin. Wien, 1862.

Renouard : History of Medicine. Transl. by Comegys, London, 1856.

Portal : Hist de l'Anat. et de la Chirurg.

Ploucquet : Literatura Medica Digesta : It is a store-house of references on medical subjects.

Briot : Histoire de l'Etat et des Progrès de la Chirurgie Militaire en France, 1817.

Mollet : La Médecine chez les Grecs avant Hippocrates, 1906.

Willis : Pharmaceutice Rationalis. Geneva, 1876-77.

But this spirit of historical research gradually declined even in the continent of Europe. " In France, Daremborg, Lorain, Maurice Raynaud seem to have left no successors; and in Germany, where one might have looked for better things, the history of medicine has fallen out of the programme of University studies. Yet it is not so long ago that every German University had a special lecturer on the subject, but, as the chairs fell vacant, they have been

left unfilled, till now there is but one professor of the history of medicine in the Fatherland, in the person of Dr. A. Hirsch, of Berlin."¹ In recent years an attempt has been made to revive the study in Germany; and we find many useful works published within the last fifteen years.

As regards systematic treatises only a few important works dealing with the subject have recently been published. Gurlt's '*Geschichte der Chirurgie*' is a monumental contribution to the history of medicine. Pagel's works: *Historisch Medicinischen Bibliographie für die Jahre 1875-1896* and *Einführung in die Geschichte der Medicine*, appeared in 1898. An encyclopædic work on the subject, as designed by Puschmann, namely, *The Handbuch der Geschichte der Medizin*, was successfully edited by Professors Neuberger and Pagel (1902-5). We have before us Neuberger's *Geschichte der Medizin*, in an English garb, Vol. I. By Playfair, London, 1910. This volume narrates the story of the growth of the medical science to the Renaissance. The second volume of Neuberger's '*History of Medicine*' is divided into two parts, of which the first deals with the progress of the science during the time between the death of Galen and the end of the fifteenth century. The concluding instalment is expected to appear shortly.

Under the auspices of the Imperial Academy, Berlin, and under the direction of Prof. Diehl, scholars have collated the important MSS. of Greek texts in the libraries of Europe; and we expect soon a new text of the Greek writers on medicine, published by Trubner & Co. "A topographical list has been issued with reference to all the sources of our knowledge of Hippocrates and later Greek

¹ B. M. J., 1889, Vol. II, p. 672.

writers. An Institute for the study of history of medicine has been founded at the University of Leipzig as a memorial to the distinguished scholar Prof. Puschmann. Under the direction of Prof. Sudhoff the Institute will undertake an entirely new edition of the Latin authors." The French school of medical historians has rendered eminent services, and medical history has for many generations received encouragement from the Universities in France. But Germany has outstripped all nations, and "the output of works and monographs, representing scholarship of the first class, is equal to the rest of the world put together" (Osler). One must look to Germany when one wishes for information regarding the history of medical science.

A very important systemic study of drugs profusely illustrated by reproductions of photographs showing particularly the methods whereby they are produced and brought to our markets, by Professor Tschirch of Berne, is now in course of publication by Tauchnitz of Leipzig.

Under the instruction of the Italian Government, Dr. Luigi Sambon of Rome commenced his work on the History of Medicine in 1895 for presentation at the next meeting of the International Medical Congress. His curious collections of "donaria" or votive offerings of ancient Italy and surgical instruments taken from the ruins of Pompeii and Herculaneum throw considerable light on the history of the healing art.

Kostomiris published an interesting treatise on Ophthalmology and Otology among the ancient Greeks in 1887. The medical faculty of Athens and the senate of the University took up the project of printing the pseudo-Hippocratean treatises which were not published before, as well as treatises of Kratenas, Galen and Promotus.

The authorities of the Philadelphia College of Physicians have officially recognised the subject of the history of medicine for which a special section has been formed in 1905.

In Europe, the study of the history of epidemic diseases has been pursued with an earnestness, and the medical men in England contributed their quota. We now possess some good histories of epidemic and pestilential diseases :

James Moore : History and Practice of Vaccination, 1817; History of the Small Pox, London, 1802.

A History of Epidemics in Britain from A. D. 664 to the extinction of Plague. By Dr. C. Creighton, M.A., M.D., 1891.

Hirsch : Handbook of Historical and Geographical Pathology, 1860, English translation by Creighton, New Syd. Soc. 1883. Geschichte der Ophthalmologie, Handbuch der gesaruten Augenheilkunde von Graefe und Saemisch, Bd. vii, s. 293.

Herschberg : Aegypten, Geschietliche studien eines Augenarztes, Leipzig, 1890.

F. Buret : Syphilis in Ancient and Pre-historic times, translated by Dr. Ohmann—Dumesnil, 1891. F. A. Davis, London.

Fayrer : The Natural History and Epidemiology of Cholera, 1888.

Macpherson : Annals of Cholera from the Earliest Period to year 1817, 1870.

Macnamara : History of Asiatic Cholera, 1876.

Bryden : Cholera in the Bengal Presidency from 1817 to 1872.

Bellend : History of Cholera in India.

Epidemics of the Middle Ages, Translated by Babington for Syd. Soc., 8vo, London, 1844.

Stephenson, Sydney : Epidemic Ophthalmia, 1895.

Gasquets : History of the Great Pestilence.

Hanser : Le cholera en Europe depuis son origine jusqu'a nos Jours. Paris, 1897.

Thompson (John) : Historical Sketch of Small Pox, 1822.

George : History of Small Pox, 1833.

Thompson : Annals of Influenza, from 1510-1890 in Great Britain, Syd. Soc.

Hodges : A Historical Account of the Plague in London in 1665, London, 1721.

America has contributed the Index Medicus, and a work entitled Physicians and Surgeons of America has been published at Concord. U. S. A. It contains biographical accounts, with portraits, of more than 1,200 representative Physicians and Surgeons of U. S. A., Mexico and Canada, in 1896. The other American publications are :—

Smart : The medical and Surgical History of the war of the Rebellion, 1888.

Jonathan Wright : Medical History of Laryngology and Rhinology.

John Mackenzei (Baltimore) : Historical and Literary Researches on Laryngology.

To supply a bibliography of current Spanish medical literature, of which, comparatively little has hitherto been known to the learned men of the world, the Index Medicus Hispanus began to appear in 1904, under the auspices of the Coleges de Medicos of Gerona.

In England, on the other hand, the study of the history of medicine has never been a favourite subject with scholars. "It is not creditable to a country which had laid the healing art under such deep obligations, and which annually sends forth the flower of her youth to its study

or its practice, that her only history of medicine which learned Europe deigns to notice is that written by Dr. John Freind early in the last century. Not till our universities adopt the custom of their continental sisters, and add a chair of the history of medicine to their teaching strength, will they enjoy the adequate conditions under which they may do posthumous justice to their great practitioners and consultants, instead of leaving the task to the alien and sometimes uncongenial hands of a Haeser, a Daremberg, or a Puccinotti.¹ Dr. Payne remarks: "We must confess, with some shame, that our own country has been, and is behind most other civilised nations in the bulk and value of its contributions to the history of medicine. Germany, France and Italy have produced, on the subject, brilliant and profound works, which remain our standard authorities. The smaller countries such as Holland and Switzerland have not been behind hand; while our cousins across the Atlantic are now displaying characteristic energy and zeal in the study of medical antiquities. They have indeed already produced, in the *Surgeon General's Catalogue* of Dr. Billings,² by far the most complete bibliography of medicine, and probably the best bibliography of any large branch of science, ever compiled in any age or country.

When we consider the interest shown, and the positive results achieved in medical history, by the medical profession in all these countries, we must admit that our own countrymen have displayed, in comparison, lamentable apathy and but little industry."³

¹ Lancet, 1890, Vol. II, p. 85.

² Index Catalogue of the Library of the Surgeon-General's Office, United States Army. 1887—1897.

³ Fitz-Patrick Lectures, 1903, p. 4.

In the Editor's Preface to the first edition of Vol. I of *Paulus Aegineta*, Adams remarks: "Notwithstanding the additions which have been made of late years to the history of medical literature, it must still be admitted that there is not, in the English language, any work which contains a full and accurate account of the theoretical and practical knowledge possessed by the Greeks, Romans, and Arabians, on matters connected with medicine and surgery. Nor, as far as I can learn, is the case very different with the continental languages. For, although the German and French have lately acquired several histories of medicine distinguished for their ability and research, the object of these works would appear to be confined to a general exposition of the leading discoveries and revolutions in doctrine which marked each particular age or epoch in the profession; and I will venture to affirm that no person will be able to acquire from a perusal of them anything like a competent acquaintance with the minute details of ancient practice."

There is no doubt that the English people did not appreciate the importance of historical research in the department of medicine. But the history of medicine as a subject had not been wholly neglected in England. Bartol and Caius were learned in it. Sir Hans Sloane (1719-1735), "made collections of materials for medical history which begin with twelfth-century MSS. of Hippocrates and Galen and extend to the letters of the physicians of his own time."¹ His famous MSS., 3000 in number, in the British Museum contain letters and notes by the eminent physicians of the country preceding his death, and they thus form the principal source of the medical history of England during the long period covered by the six reigns—Charles II to James II.

¹ Moore: *Medicine in the British Isles*, 1905-6, p. 2.

In medical biography, there are no doubt some good works in the English tongue. In 1640, Dr. Hamey wrote in Latin a biographical history of the medical men of his time from 1628, entitled *Bustorum Aliquot Reliquiae*, which was probably the origin of Dr. Munk's Roll of the College of Physicians, in three Volumes, 1518-1825, London, 1879.—Duns: Memoir of Sir James Simpson, Edinburg, 1873;—for the lives and works of British Physicians and Surgeons, the articles in the Dictionary of National Biography, Smith, Elder & Co: edited by Sidney Lee;—the faithful biographies of departed medical worthies in the *Asclepiad*, and the obituary notices in the various medical journals;—Masters of Medicine series by T. P. Unwin, London: Sydenham by Payne, Hunter by Paget, Harvey by Power, Simpson by Gordon, and Stokes by his son, are models of accurate and informing biography. There are also other standard medical biographies:

Sir James Y. Simpson: By Eyre Ballantyne Simpson, Famous Scots series.

Life of William Cullen: By John Thomson, Edin., 1859.

Biographical preface by Thomas Beddoes in "Elements of Medicine" by John Brown.

Ambrose Paré and his Times, 1570-1590: By Stephen Paget, 1897.

Kuhn: *Medicorum Græcorum Opera quæ exstant*. Lipsiæ, 1821-30. This work includes the works of Hippocrates, Aretæus, Discorides and Galen.

Joannes Rhodius (Dane): Life of Celsus subjoined to the 2nd Ed. of his work *De Acia Dissertatio, ad cornelli Celsi mentem, qua simul universa Fibulæ ratio explicataur*, Hafniæ, 1672, 4to.

Biographo universalle.

Aikin: The Life of Caius.

Burton : The Life and Writings of Boerhaave, 2 vols. Lond., 1743.

Johnson : Life of Boerhaave, Lond., 1834.

W. Cullen Brown : Memoirs of John Brown, in his edition of Brown's works, 3 vols., 8vo, 1804.

Mathew Duncan : Life of William Hunter, in Edin. Med. Jour., June, 1870.

Drury Otley : Life of John Hunter, prefixed to Palmer's edition of the Works of John Hunter, 4 vols. 1835.

Baron : Life of Jenner, 1827.

Guthrie : The Medical History of J. Evelyn and his Time (1620-1706), 1905.

Dr. William Smellie and His Contemporaries : A contribution to the History of Midwifery in the 18th Century : By John Glaister, M. D., Glasgow. James Maclehose & Sons, 1894.

Life of Richard Owen : Written by his grandson and published by John Murray.

Life of Sir Henry Hallford : By William Munk, M.D., Longmans & Co., 1895.

Life and Works of John Arbuthnot : By Geo. A. Aitken, Clarendon Press, 1892.

Epps : Life of John Walker, M.D., London, 1831.

Aveling : Biographical Sketches of British Obstetricians.

MacMichael and Munk : Lives of British Physicians. 1857.

Rolleston : Life of James Lind. Journ. Royal Nav. Med. Service, Vol. I, 1915.

In the Oxford Editions,—Edited by Dr. Greenhill
Life of Sir James Stonhouse, Bart., M.D.
Anecdota Sydenhamiana.

Life of Thomas Harrison Burder, M.D.

Life of George Cheyne, M.D.

Life of Charles Brandon Trye.

Walsh : *Makers of Modern Medicine*, 1909.

Old Time *Makers of Medicine*, 1911.

Fayrer : Sir Ranald Martin. London, 1907.

The Academic Gregories : By A. G. Stewart, Famous Scots Series, 1901. Pub. by Oliphant Anderson and Ferrier, Edin. and London.

For Greek and Roman Physicians, the reader is referred to the articles in Smith's (larger) Classical Dictionary on "Hippocrates," "Galen," "Celsus" and the rest, by Dr. Greenhill;—Sprengel: *Sundry Distempers unknown to the Ancients*, etc.;—Adams: Translation with introduction and commentary on the works of Hippocrates, Paulus Aegineta, and the Extant Works of Aetius, Syd. Soc. Ed.—The First Four Books of Celsus, Containing the Text, *Ordo Verborum*, and Translation : By Steggall, 1857 (Churchill).—'Harvey and Galen' by Payne, *Harveian Oration* 1896 ;—Quincey : *Medicina Statica* ; being the Aphorisms of Sanctorius, 1728.

Regimen Sanitatis Salernitanum : Trans. by Sir A. Croke, Oxford, 1830.

Aristotle : On Youth and Old Age, Life and Death, and Respiration : By W. Ogle, M.A., M.D., Oxon. F R.C.P., London. Longman, Greene & Co., 1897.

Celsus : *De Medicina*—Milligan's translation, 1831.

As regards complete history which give a comprehensive review of the evolution of the art and science of medicine from its earliest beginning, we have :—

Freind : *History of Physick from the Time of Galen to the Beginning of the 16th century*, London, 1725-6. He begins with Oribasius and Aetius and ends with Linaere, the founder of the Royal College of Physicians of London.

Russell: *The History and Heroes of the Art of Medicine*, London, 1861.

Wootton: *Chronicles of Pharmacy*, 2 vols. London, 1910.

A Historical Sketch of Surgery: Ancient, Mediæval and Modern. By B. A. Watson, A.M., M.D., Surgeon to Jersey City and Christ Hospitals, reprinted from the New York Medical Journal, from August, 1890.

History of Medicine and the Medical Profession, by J. H. Bass: Translated by H. E. Handerson, M.A., M.D. New York. 1889.

Much information may be gathered from the historical retrospects prefixed to many chapters in Aitken's *Science and Practice of Medicine*, in Reynold's *System*, and in Pepper's *system of medicine*. In the recent edition of Albutt's *System*, *History of Medicine* by Albutt, and *Medicine in Modern Europe* by Payne;—in Osler's *System*, the *Evolution of Internal Medicine* by Osler;—in *Encyclopædia Medica*, Vol. 7, *History of Medicine* by Willoughby;—in *Encyclopædia of Practical Medicine*, *History of Medicine* by Alison;—in *Encyclopædia Britannica*, *Historical Notice of Surgery* by Charles Creighton;—in *Chambers' Encyclopedia*, *History of Medicine* by Pettigrew; all these articles have brought up the subject to the level of our existing knowledge.

The *History of Medicine, Surgery and Anatomy* from the creation of the world to the commencement of the 19th century. By William Hamilton, M.B., in 2 vols. London, Colburn, 1831, Post 8vo.

Clifton: the state of Physik, Ancient and Modern, Lond., 1732.

Outlines of the Ancient History of Medicine, being a view of the progress of the healing art among Egyptians,

Greeks, Romans and Arabians. By D. M. Moir, Surgeon. Edinburgh, Blackwood, 1831, 12 mo.

Wise: Review of the History of Medicine. London 1887. History of Medicine among the Asiatics, 2 Vols., 1868.

Collection De Chirugiens Grecs: Bibliothèque Nationale, Paris.

Milne: Surgical Instruments in Greek and Roman Times. 1907.

Elliot: Outlines of Greek and Roman Medicine. 1914.

John Anderne and his Time: By Anderson, Lancet, Vol. II, 1897.

Thompson: The Mystery and Romance of Alchemy and Pharmacy. London, 1897.

Netter: History of Ancient Pharmacy.

Garrison: History of Medicine. 1913.

Beckman: History of Discoveries and Inventions, Art, Infirmarys and Dispensaries.

Bostock: Sketch of the History of Medicine. 1835.

Allbutt: The Historical Relations of Medicine and Surgery to the end of the 16th Century. 1905.

Minor: Medicine in the Middle Ages, Extracts from Dupony's *Le Moyen Age Medicales*. 1889.

Roswell Park: An Epitome of the History of Medicine, 1897.

Wilder: History of Medicine.

Remondino: History of Circumcision. 1891.

Surgery, Past and Present. By T. Spencer Wells. 1877.

History and Cure of Disease. By W. Heberden. 1806.

The Healing Art, in its Historic and Prophetic aspects.

By R. Quain, Harveian Oration, 1885.

Medical men and Manners of the Nineteenth Century.—Balliere, Tindal, and Cox, 1877.

Monro : The Scientific Basis of Medicines. Glasgow Med. Journal, 1885.

Headland : Advance in the Science of Medicine in Modern Times: Lancet, Lond., 1858, Vol. I, pp. 27-79.

Brunton : Introduction to Modern Therapeutics, Lond., 1892.

Chambers : True Art of Healing. London, 1866.

Willis : Pharmaceutice Rationalis. Geneva, 1876-77.

Bellamy : History of Surgical Anæsthesia, 1896.

Withington : Medical History from the Earliest Times, London, 1894. The Scientific Press Limited.

Griffiths : Early Welsh Medicine, 1888.

Jones and Withington : Malaria and Greek History, 1909.

Cleveland : On Induction and its Association with the History and Progress of Medicine. Harveian Lecture, 1896.

Brunton : Pharmacology and Therapeutics, or Medicine Past and Present, London, 1880.

Practice of Medicine among the Burmese with an Historical Sketch of the Progress of Medicine from the Earliest Times. By Keeth Norman Macdoland, M.D., Late Civil Surgeon of Prome, 1879.

Packard : History of Medicine in the United States, 1901.

Meryon : History of Medicine from the Earliest Ages.

Dunghlison : History of Medicines from the Earliest Ages.

Begbie : Address on the Ancient and Modern Practice of Medicine, delivered before B. M. A. in August 1875.

Gairdner : On the Physician as 'Naturalist.' Presidential Address delivered before B. M. A., 1888.

MacLeod : On the Progress of Surgery during the last half century, B. M. J. 1888.

Miller : Historical Notice of Surgery in his Principles of Surgery. 1844.

McKay :—History of Ancient Gynaecology, 1901.

Foster : Lectures on History of Physiology during the Sixteenth, Seventeenth and Eighteenth Centuries, 1901.

Guerini : A History of Dentistry from the most Ancient Times until the end of the 18th Century.

Windsor : Historical Researches on Use of Forceps to Fix Eye. M. R. Vol. II, pp. 219, 517. 1863.

The History of Medicine, Philosophical and Critical, from its Origin to the Twentieth Century. By David Allyn Gorton, M.D. Two Volumes (G. P. Putnam's Sons) 1910.

Medical Works of the Fourteenth Century by Rev. George, Henslow, London, 1899.

The Healing Art: Published by Ward and Downey of London.

Bedroe : The Origin and Growth of the Healing Art.

Puschmann : A History of Medical Education from the most remote to the most recent times, 1891.

Macalister : History of Anatomy in Cambridge, B. M. J., Vol. I, P. 449, 1891.

Payne : An Unpublished English Anatomical Treatise of the 14th century and its relation to Vicary's Anatomy. Lancet, Vol. I, p. 200, 1896.

Newman : *Archæologica Medica*.

Hundert Jahre Allgemeiner Pathologie (A Century of General Pathology), by R. Virchow, Berlin, 1895.

Ryan : History of Medical Jurisprudence in the Introduction to his Manual of Medical Jurisprudence, 1836.

Cook : The History of Medical Ethics, N. Y. M. J., 1915.

The English literature, though poor in histories of medicine, is not, however, without learned monographs on special departments of the medical science,—histories which

deal with the origin, growth and vicissitudes of medical schools and corporations. Payne says:¹ "We have also interesting collections for the history of medical institutions such as *Memorials of the Craft of Surgery in England* by the late Mr. J. F. South, edited by Mr. D'Arcy Power; the *Annals of the Company of Barber Surgeons*; and good histories of the Colleges and Faculties of Physicians and Surgeons of Edinburg, Glasgow and Dublin. Mr. Rashdall's important and learned work *The Universities of Europe in the Middle Ages* deals with some important periods in medical education. The Early English Text Society has published some interesting mediæval works on medicine. Finally we have in Dr. E. H. Withington's *Medical History from the Earliest Times* (London, 1894) an excellent compendium, which is less widely known than it deserves to be."

Cockayne: *Leechdoms, Wort Cuning and Starcraft of Early England*, 3 vols., 1864-6.

Beatson: *The Knights Hospitallers in Scotland and their Priory at Torphichen*, 1903.

Bedford and Holbeche: *A History of the Order of the Hospital of St. John of Jerusalem*, 1902.

Tenison: *Chivalry and the Wounded*. It contains an historical account of the Hospitallers of St. John of Jerusalem (1014-1914), 1915.

Notestein: *A History of English Witchcraft from 1558-1718*.

Paget: *A short Account of the Royal Society of Medicine*.

Oppert: *Hospitals, Infirmarys and Dispensaries*. 1888.

Hospitals and Asylums of the World: By H. C. Burdett, 4 vols. and Portfolio, 1888, J. and A. Churchill.

Payne: *English Medicine in the Anglo-Saxon Times*, p. 5.

Rausch : Medical Education, Medical Colleges, and the Regulation of Practice of medicine in U. S. A. and Canada, 1891.

Crawford : History of Indian Medical Service 1600-1913, 1914.

Jones : The Medical History of the Confederate Army, 1861-65.

Medical History of Arabia by Dr. Amoureux, of Montpellier, 1831.

The Annals of the Barber-surgeons of London, compiled from their records and other sources. By Sidney Young, one of the Court of Assistants of the Worshipful Company of Barbers of London, with illustrations by Austin T. Young, London : Blades, East, and Blades, 1890.

The Medical Institutions of Glasgow : By J. Christie, 1888.

History of Durham College of Medicine, 1890.

English Sanitary Institutions : By Sir J. Simon, 1897.

Robert Christison : An address on the Rise and Progress of the Edinburgh School of Medical Learning. Delivered at B.M.A., August 3, 1875.

John Mason Good : A History of Medicine, so far as it relates to the profession of Apothecaries, from the earliest accounts to the present period, 12 mo. Lond. 1795.

Weddel : Arcana Fairfaxiana Manuscripta : a MS. volume of Apothecaries' Lore, **nearly three** centuries old. 1890.

Regnier : Hypnotisma Et Croyances Anciehnnes, Progress Medical. Paris.

The list of the books, though it is imperfect in many ways, may serve as a catalogue of the chief works on the history of medicine in the European languages.

There is ample field of research in the collection of bibliography of the science of medicine as it was practised in ancient times, in the different countries of the world : Egypt, India, China, Greece, Rome and Arabia. The scholars may thus write the history of medicine—its rise, growth, and downfall—from materials scattered in books and periodicals. I have attempted below a short bibliography of Egyptian medicine :—

Prosper Alpinus : *De Medicina Ægyptorum*. Editio Nova. Lugd. But. 1719.

Hermanus Corningius : *De Hermetica Medicina, Libri Duo*. Helmet.

O. Borrichius : *Hermetis Ægyptorum et Chemicorum Sapientia ab Hermanni Couringii Animadversionibus vindicata*, Hafniae, 1674.

Richard Strong Sargent : *Observations on the State of Medical Science in Egypt ancient and modern*. Dublin, J. M. S., Vol. XX, p. 81. Dublin, 1842.

J. Clarkson : *On the State of Medicine in Ancient Egypt*. *Medical Times*, Vols. X and XI. London, 1844 and 1845.

M. Donovan : *Were the priests of Ancient Egypt the first Physicians ?* *The Medical Press and Circular*, Vol. II, p. 20, 1870.

J. G. Wilkinson : *The Manners and Customs of the Ancient Egyptians* : new ed., revised by Dr. Samuel Birch, 3 vols., London, 1878.

Dr. Richard Millar : *Disquisitions in the History of Medicine*, Part I, Edinburgh, 1811. It contains 100 pages on Egyptian Medicine and Priest Physicians.

Finlayson : *Ancient Egyptian Medicine*, B. M. J., Vol. I. 1893. Pp. 748, 1014, 1061.

Anatomical and Medical Knowledge of Ancient Egypt (abstract). Royal Institution of Great Britain, March 5th, 1886.

T. J. Pettigrew: History of Egyptian Mummies, London, 1834. Pp. 44-49.

Hieroglyphics and Alphabet in Chambers' Cyclopædia, 1890.

E. A. W. Budge: The Dwellers on the Nile. London, 1891.

Dr. Thomas Young: Vol. III of Miscellaneous Works. Edited by John Leitch, 1855.

H. Caton: I-em-Hotep and Ancient Egyptian Medicine. Harveian Oration, 1904.

Comrie: Medicine among the Assyrians and Egyptians in 1500 B. C.

Stern: Papyros Ebers, 2 Vols. Leipzig, 1875.

Joachim: Papyros Ebers. Berlin, 1890.

Granville: Egyptian Mummies with observations on the Arts of Embalming, 1825.

"Within the past twenty years there has been a remarkable revival of interest in the history of medicine. Chairs or lectureships have been established in Continental, English and American Universities; Societies and Clubs devoted to the study of the subject have been started; instead of one there are now three or four Journals and the literature has been enriched with innumerable monographs and articles. A comparison of the volume of the *Index Medicus* for ten or twelve years ago with a recent one, shows how actively medicine is participating in the study of origins, and how much as a profession we are being influenced by modern historical methods." (Osler.)

In England the FitzPatrick Lectureship has been founded by a lady, Mrs. FitzPatrick, in memory of her husband, Dr. FitzPatrick, for the advancement of medical history in 1901. We have the following contributions: Dr. Payne: English Medicine in the Anglo-Saxon Times. FitzPatrick Lectures, 1903. Payne's

contributions are numerous : Introduction to the reprint of the Cambridge edition of Linaere's Latin Version of the *De Temperamentis* of Galen ; Contributions to the History of Epidemics ; Biography of Linaere in the Dictionary of National Biography.

Norman Moore : 1. John Mirfeld (1393) and Medical Study in London during the Middle Ages.

2. Dr. Edward Browne (1644-1708) and the Education of Physicians in London in the 17th Century.

3, 4. History of the Study of Clinical Medicine in the British Islands.

The FitzPatrick Lectures for 1905.

The Institute for the study of history of medicine at the University of Leipzig, as a memorial to Prof Puschmann is a step in the right direction.

"The Charaka club was established in 1898 by members of the medical profession in New York interested in the literary, artistic and historical aspects of medicine. It is called after Charaka, author of the oldest extant work on Indian medicine."¹

But while so much is being done in Europe and America, we are quite apathetic in India. The neglect of the study of the history of medicine in this country is truly remarkable. One would naturally suppose that every student of medicine would receive some instruction regarding the process by which the science of the healing art has been gradually developed and built up. Such however is not the case. "By the history of medicine we do not mean medical antiquarianism or the dusty delights of the bibliomaniac, but the history of medical concepts. The study of the genesis and evolution of ideas is always interesting, and often most instructive ; dead seeds of

¹ B. M. J., April, 1905. "The Charaka Club and Prof. Osler," p. 728.

thought may be found in those intellectual tombs lining the walls of libraries, which may haply under favourable influences be quickened into new fruitfulness,"¹ The history of medical ideas should be thoroughly mastered for the right comprehension of the present state and tendency of medical thought. There is not a single chair of the history of medicine in the Indian Universities, nay, I am sorry to say, even in the English Universities. Far from learning the history of Indian Medicine, the graduates of the Calcutta Medical College scarcely know any history of the system that they practise. The *Bibliotheca Graeca* of Fabricius is full of information about the literary history of the Greek physicians, but from the *Bibliotheca Indica*, we cannot derive even a scanty knowledge about the Hindu medical science and medical authors.

The English translation of *Suśruta Saṁhitā* was undertaken by the Asiatic Society of Bengal in 1883. In that year, Fasc. I and II were published in the *Bibliotheca Indica* ; but owing to the untimely death of the translator, Udoychánd Dutt, the publication had to be postponed. Its continuation by Aghorechunder Chattopādhāya, resulted in the issue of Fasc. III, in 1891 ; and then it was again stopped. In 1897, Hærle, one of the past presidents of the Society, commenced the translation with short commentaries, *de novo*, but only Fasc. I was published. Since his time, nothing has been done as yet to complete the translation. India is the best field for study of the comparative medicine. Here we daily find practitioners of the healing art, well-versed in the lore of their respective systems of treatment ;—European practitioners, Homœopaths, Hakims, and Kavirājes or Vaidyas. But this

opportunity is not taken advantage of by scholars. Literary contributions on Indian medicine are few and far between.

The Asiatic Society began the English translation in 1883; but during the last thirty years, through various causes, not even a section of the book has, as yet been translated. And I think that steps should be taken to finish it, without delay. The medical science of the Hindus has a claim upon the Society. Our worthy President in his Annual Address in 1908, remarks: "It must be conceded with some regret that the Society, in the past, has not done quite as much towards the investigation of the history and progress of Indian medicine as it has done in other directions. By an accident, which is somewhat unfortunate and inexplicable, the energies of our members, who have devoted themselves to philology and antiquities, have been steadily kept away from the history of Indian medicine. It is true that more than seventy years ago the Society published an accurate edition of the great Sanskrit work on Indian Medicine known as the *Suśruta*. It is also true that in our own generation attempts were made twice to publish a reliable English version of the same work, but, although the undertaking was begun on each occasion by a distinguished scholar, the attempt was unsuccessful and no progress worthy of any mention was made."¹

The book was translated into Arabic before the end of the 8th century A.D. It is called "*Kitab-Shawshoon-al-Hindi*" and also mentioned as "*Kitab-i-Susrud*" or book *Sushruta* by Ibn Abillsaibial. It has been translated into Latin by Hessler (1844-47) and into German, by Vellurs. It has been translated into the modern languages of India;

¹ The Hon. Justice Sir Asutosh Mookhopādhyaya, Kt.: Annual Address, Asiatic Society of Bengal, 1908.

but strange to say, it has not as yet been translated into English.¹

That an English translation is urgently wanted, cannot be doubted. In the First Indian Medical Congress, 1894, Brig.-Surg.-Lient.-Col. T. H. Hendley, in his paper on the "Indian Systems of Medicine" remarks: "The subject is extremely interesting and our Indian members may add much to our knowledge of it by translating the best works."

The history of the publication of *Suśruta Saṁhitā* in original Sanskrit, it may not be out of place here to remark, shows a parallelism of circumstance. It was ordered to be printed by the Government of India; but the first volume and three-fourths of the second of the *Suśruta* having been printed, it was left unfinished, and was afterwards described as "an accumulation of waste paper" by the Government which had originally ordered, and had expended vast sums upon, their publication (Dec. 1835). The Asiatic Society of Bengal came to the rescue; and "with the spirit and zeal which has ever distinguished it, undertook, at their own risk, to complete the abandoned work, and so won the applause of the learned societies as the first publisher of the original *Suśruta Saṁhitā*." This edition had been exhausted long before and cannot be procured now.

There are a large number of unpublished manuscripts of medical works which deserve publication, not only on account of their historical and philological importance, but

¹ The work has recently been translated and published by Kunja Lal Vishagratna, a Kabirāja of Calcutta; but notwithstanding the laudable efforts of the translator, the translation has rather been free and even the Botanical names of the medicinal plants have not been added; factors which no doubt detract the value of a translation.

also on account of their medical value. Funds should be provided from public sources and our university should publish some of the important works. As an instance, I may mention the Bhela Saṁhitā, of which there is only a single manuscript in the Tanjore Library. The book is a storehouse of information on the ancient system of medicine as delivered by the sage Ātreya in his lectures to his pupils Agniveśa, Bhela and others. The treatise is thus older than the celebrated Cārika Saṁhitā in its present recension. The history of medicine is a record of observations, thoughts and achievements of a few great minds, and their records show the development and growth of ideas, beliefs, and doctrines. Steps should be taken to print the numerous manuscripts on medical subjects written in Sanskrit which exist in the libraries of India. The Sanskrit medical literature if published would fill a large library.

We often find quotations from Sanskrit medical texts, and of these quotations, it may be said with truth what Ogle, in the preface to his excellent translation of Aristotle's work "On the parts of Animals," says of the first of the biologists, that "the works are more often quoted than read, and it may be added, much more often misquoted than correctly quoted."

The value of a knowledge of modern languages to a physician had come to be understood, but many think that a knowledge of Latin, Greek and Sanskrit is not of any direct use to a doctor. I am an advocate for an increase in classical education, for the ancient literature possesses a certain educational value. Its cultivation is no bar to high scientific and technical studies. There have been many great savants in medicine who were also famous writers. The study of the dead languages is of the greatest utility in educating the mind,

and a sound elementary knowledge of them conduces to the proper understanding of the development of medical truths.

The ancient books in India are written in Sanskrit language. As the classical language gradually became a dead language, scientific writings and religious compositions became in course of time misunderstood. In the address to the graduates at the Madras University, 1898, we find the following remarks: "Those of you who have studied the learned shastras of your forefathers must have found ample room for opinion, that not only is modern sanitation compatible with caste, but that caste itself, although allied itself with religious observances, is a magnificent and elaborate system of sanitation But in the absence of the knowledge of Sanskrit in which these rules were conveyed, tradition, which has been the method of transmission from generation to generation, has led to no little distortion of the original dicta." Sir William Jones says: "Infinite advantage may be derived by Europeans from the various medical books in Sanskrit, which contain the names and descriptions of Indian plants and minerals, with their uses, discovered by experience in curing disorders: there is a vast collection of them from the *Cheraca*, which is considered as a work of Siva, to the *Rôganirûpana* and the *Nidana* which are comparatively modern."¹ For the accurate rendering of Sanskrit works on medicine into the modern languages an acquaintance with Sanskrit is indispensable.

Rai Bahadur Kanay Lall Dey² in his presidential address on 'Indian Pharmacology: A Review,' makes the following observations:

"It may not be unprofitable to glance for a moment at the ancient Sanskrit Materia Medica of a time long

¹ Vol. I, p. 358.

² Transactions of the first Indian Medical Congress, 1894, p. 525.

preceding the advent even of Mohammedanism in India, over seven centuries ago. I have quite lately found great pleasure and no small instruction in a research into the old Sanskrit works dealing with the classification of vegetables and the utilization of their parts in medicine as practised by the physicians of India of the Puranic era some thirteen centuries ago. The elaborate directions for the collection of drugs and their subsequent manipulation is, strange as it may seem to European minds at least, not by any means unworthy of the methods of to-day, and you will perhaps be as astonished to learn as I was to find that some of the mistakes of the most ancient of these Sanskrit writings survive in some of the best books treating of the indigenous drugs of India at the present time. They show the great progress which the ancient Hindus had made in the healing art. Minute instructions were given on every conceivable point, such as the gathering of herbs, preparation of medicines, etc. Annual plants were to be collected before the ripening of the seed, biennials in the spring, and perennials in the autumn; twigs were to be of the present year's growth: the roots to be collected in the cold season; the leaves in the hot season; and the barks and woods in the rains. There were no fewer than twenty-six forms of medicine, including powders, extracts and boluses, decoctions and infusions in water and milk, syrups, expressions, distillations, fermentations, and medicated oils, many of them crude enough in their exhibition but wondrously efficacious in the respective ailments for which they were designed. Not, however, until the quickening influence of British supremacy had been fully established in India was any notable attempt made, of which there is any record, to improve or to augment what was already known of the medicinal resources of this country. Sir William Jones' "Botanical Observations on Select Indian Plants," was

one of the earliest contributions in this direction : John Fleming's "Catalogue of Medicinal Plants" (1810); Ainslie's "Materia Medica of Hindustan" (1813 and 1826); Roxburgh's "Flora Indica" in 1820, and the labours of Wallich, Royle, and later, of Drs. F. J. Mouat and F. N. Macnamara and other ardent botanists did much towards resolving the chaos in which they found the vast mass of material at their disposal into some degree of scientific arrangement.

The gradual progress of Indian pharmacology, the widening and deepening of its influence, and its possibilities in contributing to the health and consequent prosperity of this vast Empire have been in complete sympathy with the gradual development of commerce, medicine, and science in this country. Clear of the mythology and superstition from which, not unlike the medical science of Europe, it evolved, but which lingers still in India, the science has in some measure at least demonstrated the marvellously liberal provision of curative and remedial agents within the reach of the teeming millions of this Empire."

The votaries of medicine should while actively pursuing their profession be learned in it and in the broad fields of learning other than in their own lines. As members of a learned profession, each of us should have an acquaintance with the thoughts and sayings of previous thinkers. It has been remarked in the *Suśrūta Saṁhitā* that knowledge of many allied branches of science is highly useful to a student of medicine. *Suśrūta* says¹: "Any one who

अन्यशास्त्रविषयोपपन्नानाचार्यानामिहोपनिषितानामार्थवशाच्चेष्टा तद्विद्येभ्य
एव वाख्यानमनुश्रोतव्यं कस्मान्नस्ते कश्चिन् शास्त्रे शक्यः सर्वशास्त्राणामवरोधः कर्तुम् ।

एकं शास्त्रमधीशानी न विद्याच्छास्त्रनिश्चयं ।

तस्माद्वैद्यतः शास्त्रं विज्ञानीयाच्चिकित्सकः ॥

Suśrūta Saṁhitā, I. iv.

knows only a single science, cannot have true knowledge of that science, hence a physician should be well versed in many other sciences besides the science of medicine." "When any subject which belongs to other sciences is referred to in this treatise, the student should know its meaning from the expositions by men learned in those sciences, for it is impossible in treating any science to avoid references to other sciences." For a series of ages—from the time very probably of Hippocrates to the Dark or Middle Ages—the tradition always existed that the physician should be a man of science trained after the best manner and according to the discipline of the science of the age. There are instances of eminent physicians who delved into literature and embellished it while engaged in serious investigations of medical problems. Linacre (the founder of the College of Physicians), Caius, Locke, Sir Thomas Browne (the celebrated author the *Religio Medici*), Rabelais, Galvani, Berzelius are well known names in the annals of medicine and cognate sciences. Brunfels, Fuchs, Gesner, Grew, and Linnæus immortalized themselves by their labour in the field to open up botanical glories. Thomas Young deciphered the Egyptian hieroglyphics, formulated the Undulatory Theory of Light and was master of Latin, Greek, Chaldee, Arabic, Syriac, Hebrew, Persian and Samaritan. Black, Bell (the inventor of telephone), Gray, Owen, Aggasiz, Huxley, Helmholtz are familiar names to the students of science. The immortal Harvey, Sydenham (the Father of English medicine), Boerhaave, Haller, Mead, Morgagne, Andral, Laennec, and Rush will ever be remembered as eminent physicians and scholars. The names of Adams, the renowned translator of Hippocrates and Paulus Aegineta; Greenhill, deeply versed in Greek and Arabic lore; Boussemaker and Daremberg, the editors of Oribasius and other Greek and Latin classics; Littré,

the lexicographer and the learned editor of Hippocrates will be handed down to posterity as scholars whose names are emblazoned on the roll of fame. Simpson, Brodie, Brown, Trousseau, Malgaigne, Billroth, Sloane (the true begetter of the magnificent institution, the British Museum), and Holmes will be remembered as brilliant lights in their profession and famed for their intellectual cultivation. Some of these men were in the front ranks of literary giants. Many members of the medical profession have won great fame as poets. Goldsmith, Schiller, Keats, and Crabbe became immortal from the sweet art of the lyre. Thomas Lodge (the Elizabethan dramatist), Akenside, Haller (the great physiologist), Moir ('Delta' of Blackwood), Oliver Wendell Holmes ('the autocrat, professor and poet at the breakfast-table'), and Thomas Gordon Hake were equally famed in literature and art. Fracastorius (the hero of whose Latin poem "De Morbo Gallico," gave his name to Syphilis), Sir Samuel Garth (who sang the wrath of the physicians against the apothecaries), Smollet, Armstrong, Erasmus Darwin (author of the 'Loves of the Plants'), Leyden, Aveling, Bridges, Weir-Mitchel (the author of *The Mother* and other poems), Conan Doyle (the creator of Sherlock Holmes 'the Newton of detectives,' Dr. Watson, the hero of his detective stories, and Dr. Cullingworth "the Napoleon of quacks" in "The Stark Munro Detters"), and others will ever be remembered for their attainments in poetry and science. Da Costa, in his inaugural address at the opening of the Harvard Medical School in 1898, remarks: "He (the scholar) was never more needed than now when every atom of discovery is heralded as of prodigious importance and as sure to influence immediately the laws of the universe It is the scholar whose knowledge teaches him to appreciate correctly the different fads and 'isms'

which are constantly cropping up and which he recognises as old errors with new faces." Indeed among medical men of equal calibre as regards their skill, the physician with the widest general culture proves to be the better man.

In the recent Calcutta University Commission Report (1917-19), it is no doubt gratifying to find recommendations for the chairs of Pharmacology and of the History of Medicine for our University. As regards funds for the establishment for chair of History of Medicine, the members of the Commission have expressed the hope that private generosity will furnish the necessary funds. History of Medicine has not been prescribed as a subject in the curriculum of studies for the candidates for medical degrees of the University. So there is, we are afraid, very little chance of the establishment of such a chair at an early date. We reproduce here the recommendations from the Report of the Commission :

21. *Proposed Chairs of Pharmacology and of the History of Medicine.*—We recommend further the establishment of a chair and laboratory of pharmacology, and of a chair of the history of medicine.

The chair of pharmacology should, we think, be provided by the Government in connexion with the Calcutta Medical College. At the present moment there is a chair of materia medica which is held jointly with the chair of clinical medicine. It would be suitable in future to relieve the professor of clinical medicine of the subject of materia medica and to unite that subject with the chair of pharmacology. We think the chair of the history of medicine should, if possible, be established by private benevolence and should be a university chair attached to the Calcutta Medical College; and the lectures, or at any rate certain courses, should be open to the general public. We have in Chapter XXXIV, paragraphs 112-120, explained the

procedure which we regard as suitable for the selection of occupants of university chairs tenable at a particular college, and we think this method should be used in connexion with the chair of the history of medicine.

22. *Use of the above-named chairs for investigations in connexion with the Ayurvedic and Unani systems.*—The chairs of pharmacology and of the history of medicine are desirable on general ground; but they are also desirable because it is in connexion with their teaching that effect should be given to the demand, fully justified, that the ancient systems of Indian medicine should receive attention by the University of Calcutta.¹

23. *The University cannot train students in the Ayurvedic and Unani systems.*—It is clearly impossible that we should ask the University to undertake to train students on systems which ignore what has been done in science and medicine for centuries, although they have preserved valuable knowledge. As Sir Sankaran Nair, the Member for Education, pointed out in a speech of March 24th, 1918, at the Ayurvedic and Unani Tibbi College at Delhi, the study of modern sciences is indispensable for medicine.

24. His Excellency Lord Pentland struck the same note in a speech recently delivered at the opening of an Ayurvedic hospital in the Cochin State.²

"Medicine," he said, "whether it be called Ayurvedic, Unani or western, must follow the same methods and the same aims and submit to the same tests; . . . any system of medicine must be correlated with every advance in the allied sciences such as chemistry and physiology."

Lord Pentland further pointed out the necessity for examining and standardising the drugs used in the indigenous systems.

¹ See also Chapter XLII, on Oriental Studies, paras. 6-8.

² Reported in the *Indian Medical Gazette* for March, 1918,

25. There is an obvious and promising desire at the present moment among the numerous adherents of these systems for closer touch with modern scientific methods. In time no doubt they will be able to make available for the practitioners of western medicine the traditional knowledge which is of real value; and will reject, as western medicine continually rejects, those theories which are mere survivals, and cannot stand the test of experience. The distinction between Indian and western 'systems' of medicine will then disappear.

26. *Chair of Pharmacology and Materia Medica.*—Although pharmacology figures as a subject of the university curriculum there is no professor of pharmacology in Calcutta, nor we believe, elsewhere in India. It is only right however to point out that pharmacological investigations of the first importance, on emetin and other substances, have been carried out in the pathological department by Sir Leonard Rogers. But the subject is one which should be provided with a separate department, similar to the departments in London, Cambridge, Edinburgh and other universities, and in such a department it would be fitting that a systematic investigation should be undertaken of the drugs used in the Ayurvedic and Unani systems, as well as of the other drugs furnished by the immense variety of the natural products of India. As pointed out in paragraph 21, we think that the subject of materia medica should be detached from the chair of clinical medicine and should be dealt with by the professor of pharmacology.

27. *Chair of the History of Medicine.*—The chair of the history of medicine of which we propose the establishment should deal not only with the history of medicine in India, but with the history of medicine generally, and we think it essential that it should be held by a qualified medical man. It is only in the light of modern medicine

that ancient systems of medicine can be judged in their true perspective and relationships. The subject is one of importance not only for medicine but for the history of science and civilisation generally. In a number of European universities, notably the University of Paris, there is a chair of the history of medicine; and there is a growing sense of the necessity, in these days of specialisation, of establishing teaching which shall give to the specialist a wider view of his subject. Sir William Osler, the Regius Professor of Medicine in the University of Oxford, has drawn attention to this aspect of the matter in his interesting preface to the recently published *Studies in the History and Method of Science*, edited by Dr. Charles Singer,¹ which deals largely with the history of medicine. We hope that private generosity may furnish at an early date the funds for the establishment of such a chair as we suggest.

The question may be asked: What is the importance of the study of the history of medicine? Let us consider the advantages of such a study in detail.

I. Ferdinand Hoefer in the Introduction to his valuable *History of Chemistry* says: "I have always thought that the best method of popularising scientific studies, generally so little attractive, consists in presenting as in a panorama, the different phases a science has passed through from its origin to its present condition." "History," says Gibbon, "is indeed little more than the register of the crimes, follies and misfortunes of mankind." In general history, the scholars try to unravel the factors which led to the downfall of ancient empires such as those of the Greeks, Romans, Hindus, Arabs and Moguls, they take delight in tracing such downfalls to errors and mistakes of cruel tyrants; but in the history of sciences, mistaken theories and erroneous

¹ Published by the Clarendon Press, 1917.

facts are thought unworthy of their scholarly instincts. But errors of king, and false theories of scientists are equally important for the progress of the world in right direction. "No science nor, indeed, any single form of knowledge can be properly appreciated apart from the records of its evolution; and it is as important to be acquainted with the errors and misleading theories which have prevailed in regard to it, as with the steps by which real progress has been made" (Wotton). Fuller remarks¹ : "History maketh a young man to be old without either wrinkles or grey hairs; privileging him with the experience of age without either the infirmities or inconveniences thereof. Yea, it not only maketh things past present, but enableth one to make a rational conjecture of things to come. For this world affordeth no new accidents, but in the same sense wherein we call it a *new moon*, which is the old one in another shape; and yet no other than that hath been formerly. Old actions return again, furnished over with some new and different circumstances." Moore² says : "The study of history is most worth pursuing when the consideration of the past can be made useful to us in the present. The lesson, "*Ars longa, vita brevis*," is plain enough wherever we contemplate the attempts of men to learn and to teach medicine. Further than this, we may learn that only those subjects become really valuable to the student, in which he has sought out things for himself, so that his knowledge does not rest on the dicta of a teacher.

"Last, we may conclude that medicine in itself, with its essential preliminary, anatomy, contains sufficient opportunities of training in every form of observation and of logical deduction from what is observed, and that, for the

¹ B. M. J. 1902.

² Norman Moore: Fitz-Patrick Lectures: Medicine in the British Isles, pp. 82-83.

rest, a mind which has been opened by a sound literary education is that best adapted to follow the lifelong study of medicine which is the duty of every physician. These are the conclusions to which I have been led by a study of the history of the education of physicians in London from the time of John Mirfeld to that of Edward Browne, from the Middle Ages to the time when the methods of study which we now follow began to be used." The history of any science is always worthy of study and attention. In medical science, the students often overlook and lose sight of the patient labours of the early workers, many of whom laid the foundation of discoveries that have since proved of inestimable value to the civilised world. Many of the empirical methods of modern times may be traced a long way back. Allchin, in his Harveian Oration, 1903, remarks that "it is easy from our present standpoint to overlook the help that the advances made by these workers (Gilbert, Glisson, Willis, Young, Sydenham, Heberden, Hunter, Prout, Bright, Watson, Parker, Jenner, Harvey, Gull, Clark, and Reynolds) contributed to the general progress; nor are those suggestions which proved to be erroneous altogether to be disregarded, since in their refutation the right way often became manifest." The mediciner, even in ancient times, is advised to be "skilled in the judgment and science of the wise and skilful physicians who have preceded him."¹ "Professor Hamilton said that even in medicine, history repeats itself. The pathology of our forefathers was called 'humoral pathology.' It was supposed to have received its death blow by 'Cellular pathology.' Recent discoveries would seem to point to a revival of the humoral pathology of the past. The more we became acquainted with diseased processes,

¹ Griffiths: Early Welsh Medicine, Extract from Howell's Work.

the more we are convinced that no one system, however plausible, would explain the whole of them."¹

The object of the historical study of medicine is to describe the process by which the principles of medical science have been wrought out in the history of the world from prehistoric times till the present day. Many ancient and modern scholars have worked in this wide sphere.

"A system cannot be thoroughly comprehended until we know all the consequences which have actually followed, and which it is the business of history to trace from it in the application of principles."² The student of medical history must make himself intimately acquainted with general history and trace the influence which the science of medicine has exerted in the historical development of the civilized nations.

I reproduce here a letter addressed to the editor of the *British Medical Journal* in 1886. The letter speaks for itself and its suggestion may be availed of with profit, in prescribing subjects of examination for medical degrees.

HISTORY OF MEDICINE AS A BRANCH OF PROFESSIONAL EDUCATION.³

SIR,—May I suggest, while the scheme for granting medical degrees for London students is still under consideration, that a very suitable item in the requirements for a title which should be something more than a mere licence to practise, would be an acquaintance on the part of candidates with the history and progress of medicine.

One is not disposed to deny that a man may be perfectly capable of opening an abscess or expressing a placenta,

¹ B. M. J. 1893, Vol. II, p. 1122.

² *Hern*: History of Jurisprudence, p. 160, 1866.

³ B. M. J., Vol. II, p. 893, 1886.

without knowing anything of the theories of the medical schools, or the vagaries of bloodletters and water-doctors; but it is certainly to be desired that a man who aspires to the higher ranks of the profession should be conversant with, at any rate, the more salient facts which have advanced or retarded the progress of medicine in the past.

Such knowledge is not by any means without its value. History repeats itself; and one of the surest methods of avoiding error in the present and in the future is to cultivate an acquaintance with the mistakes of those who have preceded us on the difficult and uncertain path of progress and research.

The subject is one which might well form part of the classical education to be exacted from future aspirants. At present beyond a vague notion of a gentleman called Hippocrates, and of another called Galen, most medical men know little, and would be sorely plagued if a patient more than usually erudite ventured to allude to the subject—I am, sir, your obedient servant,

ALFRED S. GUBB.

There is no doubt that nowadays the history of medicine has become more attractive. The University of London had lately added the history of medicine to the subjects of examination for the M. D. degree. A chair of the history of medicine had been founded in the University of Rostock.

II. "For the student the educational aspect is of incalculable value, since medicine is best taught from the evolutionary standpoint. What a help it is to give early in his career a clear view of the steps by which our present knowledge has been reached! And yet in the present crowded state of the curriculum, it seems very undesirable

to make the history of medicine a compulsory subject. An attractive course will catch the good men and do them good, but much more valuable is to train the mind of the student to look at things from the historical standpoint" (Osler). The graduates in medicine, surgery and midwifery embark on their professional career without any appreciation of the history of the subject.

Students of our universities know little of medical history. They speak of *facies Hippocratica* but they are ignorant about the works of the renowned Father of Medicine. His works are more often quoted and talked about than read; indeed many practical surgeons are not ashamed to own themselves ignorant of the traditional knowledge of the *Asclepiadæ* as crystallised by Hippocrates. They do not know that *Colchicum* is named after Media of Colchis, that Sertuner adopted the term "*Morphinum*" from "*Morphæus*," the son of the god of sleep (*Somnum*), that *Achelia* Mitford plant was discovered by Achilles, that the use of *Acetum Scille* and *Aniseed* we owe to Pythagoras, and of hellebore and iron to Melampus. To them, such terms as *Atropa Belladonna*, *Centaury*, etc., are words without meaning. They never think of the stories that gave birth to such words. They are ignorant of the facts that Themison first distinguished rheumatism from gout, Menacretes invented the diachylan powder, Avicenna invented the method of silvering and gilding pills, Oribasius popularised the necklace method of treatment and Sir Theodore Mayerne introduced calomel and blackwash in medical practice, though the former is alleged to have been known in India many centuries before it became known in Europe. They do not know how much the present system of medicine owes to the Arabs, and the indebtedness of the latter to the Greeks and Hindu systems of treatment. They scarcely know the names of Geber,

Rhases, Avicenna, Paulus, Celsus, and Vāgbhaṭa. They know little of Goulard, Glauber, Scheele, Sydenham and others. They will be astonished to learn that the first London Pharmacopœia adopted nearly half the Formulary of Mesue. They do not know the history of temple sleep, the origin of royal touch, cramps of rings, and the abracadabra mystery. Of the influence of ladies in the names of drugs, there are interesting accounts. Myrrh is named after Myrrha, the daughter of Cynirus, King of Cyprus; Mint is after Mentha; Nepenthes was the drug Helen mixed for Telemachus in a 'mirth inspiring bowl'; Atropa Belladonna—so called from Atropa, the eldest sister of the Fates, who cut the thread of life, and from Belladonna—so called from the Spanish ladies who made use of the plant to dilate the pupils of their brilliant black eyes; Colchicum from the inhuman Medea of Colchis; Cinchona is named after the wife of the Viceroy of Peru, the fourth Count of Chinchon; and the otto or atar is named by the famous Nur Jahan, who on the occasion of her marriage with Emperor Jahangir, observed and collected the scum on the surface of rose water in a canal in the garden of the palace and named it Atar-Jahangiri. To Cleopatra is ascribed a few prescriptions, and two writings, one of which *Diseases of Women* has survived. The knowledge of these facts would not of course relieve the suffering humanity, but surely they add some amusement and interest to the study of materia medica by students. Celsus has preserved some of the sayings of the empirics: "Diseases are not cured by talk but by drugs"; "The important question is not what causes disease but what dispels it"; but surely we live in a better age, and the etiology of diseases and history of drugs must be learnt by a scientific physician.

"Medicine preserves, in its terms and names, much that carries us back beyond its written history to the days of

mythology, and we still see foot-prints in our phraseology enabling us to trace the growth of our calling through fetichism, miracle cure, and astrology, to a more rational system. We, for instance, find the names of the Olympic gods preserved and variously applied through medicine. Saturnine poisoning reminds us of Saturn, and ammonia recalls Jupiter Ammon. We almost daily handle vulcanized rubber instruments, while Mercury, the messenger of the gods, now serves us. The word Hygiene is a monument more enduring than brass to Hygiea, the daughter of Esculapius, the god of medicine. The tendo-achilles recalls the hero of Homer's Iliad, and also the delusion of ancient surgeons, that wounds here were fatal. Lunacy comes to commemorate the fact that our ancestors believed the lunatic's brain had been acted on, and that his mind was controlled by the moon. The word artery antedates Harvey, and tells of a time when these vessels were supposed to carry air, and not blood, while the ever-present calomel, derived from Greek words meaning a good or beautiful black, tells of a time when calomel was æthiop's mineral, or hydrargyrus cum sulphure, and not the white chloride of to-day. So names live after the reason for them is forgotten.

In such terms as obstinate, persistent, malignant, or when we say a disease attacks, invades or manifests itself, we use terms which once carried the idea that disease was an entity, endowed with certain passions and vindictive purposes, and that the doctor's province was to take the patient's side in the deadly strife ¹

It seems curious that while the study of history of other branches of learning are thought essential for the liberal education of the young aspirants to fame in their

¹ Dickinson: Delusions in Medicine. Annual Address delivered before the Medical Society of Virginia, 1902.

respective callings, medicine is the only subject, the historical aspect of which is equally neglected by the professors and students alike. "No student in divinity considers his equipment complete without a course of Church history; no student of law who aspires to the higher grades of the profession denies himself a survey, at the hands of a competent lecturer, of the successive phases through which the conception of right and its practical applications have passed. Medicine alone among the sister professions permits its votaries to leave its hall without that study of its past which "intelligent curiosity" alone would of itself seem to impose as at once a pleasure and a duty." ¹

III. The knowledge of the history of medicine is exceedingly useful for those who like to carry out research work in some departments of the science. "To take stock," says Mr. Knaggs,² "as it were, from time to time of what has happened in days gone by is not without its help in enabling us to estimate truly and direct the progress in the present, and it even has its bearing upon the prospects of the future. It is not wise in any department of knowledge, be it history, science, art, or any other, to confine one's attention simply to the present; we should seek to draw wisdom from our stores of the past to influence our actions in the present, and our judgments for the future." One must know the amount of progress achieved in a field of enquiry by scholars, before he can attempt any serious investigation on the subject. Without such knowledge, much of his labour might be misspent on questions already solved by others in the field. As an instance I quote here the words of Professor Bier: "It is well known that the cupping-glass is amongst the oldest therapeutic remedies. But when I lately—though, alas!

¹ *Lancet*, Vol. II, Sept. 7, p. 654. 1895.

² *A Reminiscence of Forty Years*, *Lancet*, Vol. II, p. 1425. 1893.

much too late—looked up its literature, I was not a little astonished to learn how extensively and variably this venerable instrument has been used by all peoples of the world, by the lowest primitive and highest civilized nations; its history extends to our day. If I had studied the literature at the right time, we could have saved much labour, for I learned that numerous difficulties—to overcome which, we had much trouble—had been solved long ago. I furthermore learned that the idea of sucking out pus with the cupping-glass, which I believed was originated by me, had been in use in olden times, and in certain instances has been practised repeatedly.”¹ The German historian Karl Sprengel justly points out that many remedies re-discovered in modern times were referred to by Dioscorides. Among these are the application of wool-fat to wounds, external applications of castor oil, male fern against tape worms, elm bark for eruptions, horehound in phthisis, and lac for ulcers. Bottini (1837-1903) anticipated Lister by publishing a work on the use of carbolic acid in surgical operations; and he was one of the first to recognise the rôle played by parasitic organisms in the etiology of pathological conditions. Servetus and others seem to have anticipated the immortal Harvey in the discovery of the circulation of the blood, although without apparently realising its importance or significance.

Belloste (1654-1730) “was one of those writers whom Verneuil called the minor prophets of surgery. That distinguished surgeon said that if one had the curiosity to look into forgotten old books, it would be found that the majority of important discoveries, the fruits of which we now enjoy, belong not to the celebrities of the profession, but to men of whom the world knew little while they lived,

¹ Bier's *Hyperæmia*, Translated by Blech. 1909, pp. 79-80.

who worked far away from the great centres of intellectual activity, and who never wore the professorial purple. In Belloste's day the practice in dealing with wounds was to keep them widely open with tents so that discharges might escape and remedies might be applied to every nook and cranny in their depths. Where suppuration was profuse the dressing was changed every day, sometimes twice a day, to the grievous distress of the patient. Belloste strongly denounces these "cruel methods," and teaches that wounds should be dressed "gently, quickly and seldom." He observed that the admission of air to wounds had a bad effect; this he explained by the fact that the atmosphere was full of very subtile particles or atoms which he suggested might produce "very dangerous corruptions, when they attach and agglutinate themselves to sensitive parts." "Evidently," he says, "the 'corpuscles of the air in hospitals are more charged with subtile and caustic particles than that of other places; and owing to them, unless great care is taken, wounds become chancreous, putrid, and often fistulous and incurable. Hospitals long retained the foul smell engendered by patients. The cause of this, in Belloste's opinion, could be nothing else than the "impure atoms" which adhered to the walls, and which obliged those who wished to live in the same place to cover them with plaster or chalk for the purpose of preserving themselves from the infection that might arise from their "morbific ferments." If, he argues, these atoms have sufficient tenacity, consistence, and fermentative virtue to attach themselves to a hard, even body, such as a wall, and to remain there several months without losing their foul smell or their disposition to erode and putrefy, what will they not do in exposed wounds, where the fibres are always moist, glutinous, delicate, and without support? With the substitution of

the word "germ" for "atom," these passages seem to show that Belloste's prophetic soul dreamed dimly indeed and vaguely of things to come."¹

A curious illustration is supplied by Dr. James Johnson in the narrative of his visit to Pompeii: "The Dilator or Speculum, for which Mr. Weiss of the Strand obtained so much repute a few years ago has its exact prototype in the Bourbon Museum at Naples. The coincidence in such an ingenious contrivance would be absolutely miraculous; but unfortunately there is a key to the similitude, which destroys the charm of astonishment. A crafty Frenchman imitated from memory, and with some awkward deviations, the Pompeian Speculum, and passed it off as his own. Weiss improved upon the Frenchman, and hit upon the exact construction of the original! Many modern discoveries may probably have originated in the same way."² The instrument commonly known as Hey's saw was first invented by Avicenna, and Civial was anticipated by Ammonius, a lay lithotomist, who employed an instrument for breaking stones in the bladder, in the time of Hippocrates.

"In the Papyrus Ebers, which is a copy of an Egyptian medical compilation already old in the time of Moses, there is mention of polyuria, and it is hard to conceive that such a marked departure from health could at any time have escaped observation; yet no notice of it is to be found in Greek writings earlier than those of Aretaeus of Cappadocia (*circa* A. D. 150), who is supposed to have been a contemporary of Galen, and was probably also a Roman physician. His description, like that of the unknown Egyptian priest, or that of Galen, who wrote at

¹ B. M. J., Nov. 4, 1905. Vol. II, p. 1220. Dr. H. Folet: *Echo Medical du Nord*. July 22nd, 1905.

² Miller's Surgery, p. 11, foot-note.

length upon the disease, lays stress only on the polyuria and thirst. The important point that the urine contains sugar appears to have escaped the notice of all early European writers; nevertheless, if we trust some passages of the Ayur Veda (*circa* A. D. 500?—500 B.C., see my "Surgical Instruments of the Hindus," Vol. I, Introduction) it was known at that time to the Hindus. In a Cingalese writing of the fifteenth century diabetes is undoubtedly referred to as "Madu mehe" or "*honey urine*," so that in this respect European knowledge lagged sadly behind; for it was not until 1679 that our countryman Willis mentioned that the urine of diabetes has a sweet taste. A century later Dobson of Liverpool demonstrated the presence of sugar.¹

IV. "As a study, the history of that branch of science which has to do with healing has peculiar attractions. With foundations in anthropology medicine has close affiliations with most of the theologies, many of the philosophies, and with the pseudo-sciences of alchemy and astrology. To trace its gradual evolution, to study the relations which it has borne to the intellectual movements at different periods, is the work of scholars trained in the modern methods of research" (Osler). The study of anthropology and medicine presents us with many interesting problems. The liability of the different races of men who differ in colour of their skin, to diseases, in a varying degree, can only be understood from a study of the geographical distribution of diseases among the races of the world and of the history of the many epidemics that overran the face of the earth in the past ages. Ainhum, goundou, sleeping sickness and the filarial affections are confined mainly to the Negro race, but they are insusceptible to

¹ Diabetes Mellitus. By R. Saundby in Albutte's *System of Medicine* Vol. III, p. 167.

yellow fever, malaria and piles. West-Indians and Africans are however susceptible to yellow fever when they return to their countries from a long residence in temperate climates. But in general, they are at all times less liable to violent attacks than Europeans or North Indians. The Negroes are exempt from piles and from varicose veins, and comparatively immune from cancer and syphilis; they are generally free from gout, the disease of the civilised man. The Dutch are prone to mesoblastic and chiefly vascular degenerations; and we find the neurotic tendencies of disease as a whole among the French race. These facts can only be verified by the study of the geographical history of the diseases. Clemow says: "A study of medical geography is not complete—and may indeed be misleading—unless supplemented by a study of medical history. Hardly any disease has a permanent geographical distribution. Even those diseases which are practically ubiquitous vary from time to time in their virulence and in the number of their victims. But it is particularly in the large class of 'epidemic' disorders that a study of their history becomes of the greatest interest and value."¹

The knowledge of the medicinal properties of herbs and roots in the treatment of the sick, the surgical treatment of wounds and the corrections of dislocations or fractures of bones can be traced even amongst primitive nations,—and we can learn the instructive beginnings of the science of medicine.

The study of the history of diseases is an important part of a survey of the present condition of the world. It should be compared with a careful estimate of the past. From scanty materials, the historian is required to reconstruct the earlier ages of human history and to trace the

¹ Albutt's *System of Medicine*, Vol. I, p. 113.

development of medical science of to-day. The student of history who studies the racial peculiarities of diseases, the true origin of epidemics, the influence of heredity, and the natural classification of the morbid conditions, must be skilled men in a very important aspect of medical science which has not as yet received the consideration it deserves—the history and geography of diseases. The importance of the subject should be thoroughly realised especially in England, by virtue of her worldwide dominions. If there be any nation on earth, to which the subject of history of medicine should be peculiarly its own, it is the English who have the best opportunities of supplying the data required for the purpose. Sir George Campbell, one of the late Lieutenant-Governors of Bengal, observed with pride, but without the least exaggeration, at the meeting of the British Association for the Advancement of Science in 1886, “in our vast empire we have every race and every shade, every stage of progress, from the lowest to the highest, every institution and every method of living. As rulers, as explorers, as merchants, as employers of labour, as colonists, we come into the nearest contact with almost every people and every tribe on the face of the earth, we are indeed a people who, if we make but the most moderate use of our opportunities, may bring together such a mass of knowledge as to leave nothing wanting.” India as a part of the British Empire has peculiar advantages for the study of the growth of the medical science. “India is in some sense an epitome of the world,” and Bengal may be said to be an epitome of India.

V. The study of history of medicine is “a useful pastime for the leisure moments of busy men who take an interest in the history of the profession local or general. Both in England and the United States this has tended more towards the biographical side of medical history,

and many valuable monographs have been published." Who would not sympathise with the sorrows of Dr. Morton whom Lecky declares in his History of European Moral to have done more for the real happiness of mankind than all the moral philosophers from Socrates to Mill,—the inventor and revealer of anæsthetic inhalation, and who passed the later years of his life in agricultural pursuits, supplying an instance of national ingratitude ! His soul rests in peace :

" Not poppy, nor mandragora
Nor all the drowsy syrups of the world
Shall ever medicine these to such sweet sleep."

Shakespeare.

How much Jenner suffered from the incredulity and ridicule of, and direct and determined oppositions from, the various members of the profession who stigmatised his innovation as "a gross violation of religion, morality, law and humanity." Antiseptic surgery has robbed operation of its after-complications, as anæsthetics have averted and annulled pain of the surgeon's knife, but it took years of patient toil to gradually eliminate fallacies and establish and teach the conditions of success. None who have not read Lister's early contributions, and the literature they called into being, can realise the difficulties that he had to overcome, in his epoch-making work on Hospitalism and Wound Treatment. The remark of the butler, who found Simpson lying in his room apparently unconscious, " He'll kill himself yet wi'tha experiments," gives us a graphic account of the hardships and perils incurred in his endeavour to make the severest surgical operations painless. Yet in 1839, only seventeen years before this great discovery, Velpeau said : " All research for an agent to destroy pain in operation is a mere chimera and unworthy

of further considerations." It is no doubt interesting to learn that such an eminent benefactor of men, as immortal Harvey, after his celebrated book on the "Circulation of the Blood" came out, "fell mightily in practice; 'twas believed by the vulgar that he was crack-brained, and all the physicians were against him." As recreation, busy practitioners should study the biographies of the medical worthies. It has been said that Professor Osler's recreation is bibliography.

As a relief to the pressure of learning, the doctor should turn to literature and the arts, especially to drawing and other extra-professional pursuits. From a study of the biographies of celebrated medical men, we may form an idea of the different lines adopted by them as their hobby. It is a mistake to suppose that medicine is a mere mechanical training. The training in medicine is a liberal education. It develops a man's powers in whatever directions those powers are later to be utilised.

As a 'side line,' physicians have derived personal pleasure, and secured benefit to humanity from cultivation of fascinating diversions, entirely different from those required in their daily vocations. We should remember that Apollo was god of healing as well as leader of the Muses. Avicenna became the "Father of Geology" and Linnaeus, the "Father of Modern Botany." Stenson revelled among fossils, Auenbrugger and Boerhaave cultivated music; Henle played the violin. Many embellished literature. Haden Fridenburg and others have distinguished themselves as exponents of etcher's art. William Hunter, Scarpa, Henry Thompson, and Shradly found joy in painting pictures. Canon Arnot, like St. Luke, entered the ministry. Dr. W. T. Grenfell became celebrated as "Grenfell of Labrador." Keats, Goldsmith and Bridges became celebrated poets. Lord Elkerston (formerly

Dr. Walter Foster), Dr. Jameson (Dr. Jim, the Premier of the Dominion of South Africa), Sir George Robertson (the hero of Chitral), Dr. George Ernest Morrison (the official political adviser of the President of the Chinese Republic), Bayol (the Honorary Colonial Governor), Dr. E. R. Taylor (the Mayor of Sanfrancisco during the most perilous times) celebrated themselves as doctor-politicians. Sir Seymour Haden (President of the Royal Society of Painter Etchers), and Mr. Henry Tonks (Asst. Professor at the Slade School of Fine Art) are instances of doctor artists. Sir Charles Wyndham became an acknowledged head of the dramatic profession.

Sir Joseph Hooker (the Director of Kew Gardens) and Professor Huxley began their career as naval surgeons and became eminent men of science. Dr. Harvey W. Weley was the great chemist who denounced the food adulteration and the selling of spurious soil fertilisers as a crime. Dr. Alexander E. Bell became famous as the inventor of Telephone, that is, for the creation by means of the voice of undulations in an electric current. Livingstone, Mungo Park, Kirk, Rae and Emin Pacha are well-known as explorers. Mr. Stephen Paget acted as the Secretary of the Research Defence Society and so did incalculable good to the cause of science. These eminent physicians have writ their names large in the history of medicine. Many have been enthusiastic photographers. Some have interested themselves in collection of prints, microphotographs, books, and coins. Many devoted themselves to horticulture, floriculture, agriculture and cultivation of plants. Many medical men have gone into the breeding of high grade dogs.

VI. A study of the history of a science helps materially in the formation of character. When students leave their colleges and hospitals, the young graduates are

imbued in their mind with an idea that their education is complete. But if they realise the greatness of intelligence of the worthies of the past and their share in the progress of science, the effect would be "to modify their estimation of self," and to "help to encourage that modesty of bearing which is ever a noble feature in the perfect character of all great and good men."¹ "I often think we are too apt, in the preoccupation of the present, to forget what a great amount of work was accomplished by our predecessors and how completely, in many instances, they fashioned the pathway which has led to many of our modern achievements. Only to mention the honoured name of Celsus, we find several of the operations described by him are still performed, and he has recorded his experience, or rather the experiences of his time, with a force and precision that never probably have been surpassed. Some perhaps may say, "What have we to do with ancient surgery? We are practical men; give us the surgery of the present day." But much of the practice of the present is founded on the labours of the past, on the thought and the toil of those who are no more :

Vergiss die treuen todtten nicht.

There is some tendency to displace the leaders of the generations who have gone before from the pedestals on which the admiration of their contemporaries has placed them. The traditions of the past are, I suppose, a part of the discipline of the surgical mind."²

"Above all, he will have learnt from the lessons of the past the one great truth that, however important a

¹ Knaggs, *Lancet*, 1893, Vol. II, p. 1425.

² An Address on the Old Surgery and the New. Sir W. Mac Cormac, F.R.C.S.; *B.M.J.*, 1888, Vol. II, p. 865.

discovery he may imagine he has made, it behoves him to be modest in the face of what has been done before him.”¹ It is highly necessary for a physician to practise self-control and to be of firm and genial manners.

The spirit of disdain for the thoughts and beliefs of the ancient masters of medical science may deprive the future generations from the delight in tracing the growth of the science—a subject which may prove of intense interest to the medical profession.

The study of biographies has been used from time immemorial as an aid to the formation of character by stamping on the minds of students moral impression along with interesting ideas.

Idle pretence of superior success, haughty assumption of power of the instruments of precision for diagnosis and treatment, foolish confidence in vague statistical reports, are unworthy of the graduates of medicine. Be honest and straightforward. Then let the future take care of itself. It is neither always safe nor desirable to discard our old weapons as rusty and futile. Always remember that our present position is the outcome of the struggle of the different schools of medicine, the dogmatists, the empirics, the methodists, the galenists and a hundred other sects. It often happened that one theory was loudly proclaimed as excellent until another just as fallacious had arisen to overthrow it.

“It appears to me,” says Adams, “that, at certain periods of ancient times, the standard of professional excellence was such as would not easily be attained at the present day, with all our vaunted improvements in knowledge; and that many of those early masters of our art were

¹ Sir Felix Semon: Relations of Laryngology, Rhinology, and Otology with other Arts and Science, B.M.J., Vol. II, Sept. 24, 1904, p. 717.

distinguished for varied stores of erudition, an ardent love of truth, and an aptitude to detect the fallacies of error, such as few of us even now can lay claim to. The Father of Medicine held that, to become an eminent physician, it was necessary not only to be well acquainted with the structure of the human frame, but also to be skilled in logic, astronomy, and other sciences (*De Aer. Aq., etc.*); and of him it may be truly asserted, that he cultivated the art of medicine upon the strict principles of the inductive philosophy more than two thousand years before the world gave Lord Bacon the credit of introducing this method of philosophising. His devoted admirer and follower, Galen, was evidently the very *beau ideal* of an accomplished physician; skilled in all the sciences of the day, in logic, mathematics, rhetoric, and the first philosophy; to all these ornamental branches of knowledge he added a minute acquaintance with anatomy and physiology; a practical experience with the phenomena of diseases as diversified by climate, situation, and the varied modes of life; a singular perseverance in collecting facts; and an extraordinary ability for generalizing them. The contemporaries of Celsus regarded him not only as well acquainted with medical literature, but also as being minutely skilled in every elegant and useful science which was known and cultivated at that remarkable period. And Rhases, the Arabian, requires of him who aspires to eminence in the medical profession, that, instead of wasting his earlier years in frequenting musical and drinking parties, he should have spent them in conning over the valuable records of ancient wisdom. "But the Sciolist," says he, "who gives himself out for a proficient in the art, while he has scarcely even a smattering of learning, will never be deserving of much confidence, nor ever attain any great eminence in his profession. For it can never be that any individual, to

whatever age he may reach, should be able to comprehend in his mind a subject so vast and diffuse, except by treading upon the footsteps of the ancients; since the boundaries of the science far exceed the narrow limits of the life of man, as is the case with most of the liberal arts as well as with medicine. The number of authors is not small by whose labours the art has attained its present growth; and yet one may hope to master the monuments of their industry within the space of a few years. Let us suppose that, in the course of a thousand years, a thousand authors had made improvements in the profession; and then a person who has diligently studied their works may improve his mind as much in knowledge as if he had devoted a thousand years to the study of medicine. But, when an acquaintance with former authors is despised, what need be expected from the efforts of a single person? For, however much he may surpass others in abilities, how is it to be supposed that his private stock of knowledge should be at all worthy to compare with the accumulated treasures of antiquity? In a word, he who has never turned over the pages of the ancient physicians, nor has formed to his mind a distinct conception of the nature of diseases before he enters the chambers of the sick, will find that, from ignorance and misapprehension, he will confound one complaint with another, for this obvious reason, that he has come to his task unprepared and uninstructed.”¹

We flatter ourselves that we live in a scientific age and we are scientific men. We smile at the ineptitude which led Harvey's contemporaries to abuse him and scout his discovery, and the Faculté de Médecine de Paris to forbid the introduction of his writings on the circulation of the blood in the medical schools. We pharisaically

¹ Paulus Egineta: Sydenham Society Edition, Editor's Preface, pp. xi-xii.

felicitate ourselves that we of the twentieth century are blessed with more receptive minds. "*Tempora mutantur non nos mutamur.*" It is not so long since that Lister had to face a storm of antagonism and abuse, and found himself and his followers involved in long and bitter controversy on the subject of antiseptic surgery, or that the renowned Pasteur was persecuted by the profession, which ultimately profited most by his discoveries.

"Like all really great physicians," says Neuberger,¹ "Hippocrates was far from shutting his eyes to the history of medical art, far from despising, in blind over-estimation of his own powers, the work of his predecessors, because it may have been faulty. In *Ancient Medicine* he writes: do not say that the old art of healing should be abandoned as of no account or as though its investigations were wrongly conducted; on the contrary, I maintain that its way of thinking came so near to truth that one should take it more into consideration and wonder at the discoveries made inspite of so great a lack of knowledge.' These words, which even to-day may be laid to heart, demonstrate, not alone the reverent disposition animating the master, but also the motive of that magnanimous action by which Hippocratism restored the discredited art of ancient days to its rightful position."

"The first deficiency noted by Lord Bacon, in his review of medicine," says Russel,² "is 'the discontinuance of the ancient and serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they proceeded, and how they were judged by recovery or death.'³ 'This, in fact,' wisely writes Dr. Adams,

¹ Neuberger: *History of Medicine*, Playfair's Translation, p. 130.

² Russel: *History of Medicine*, p. 55.

³ *Of the Proficiency and Advancement of Learning*. By Francis, Lord Verulam. Edited by B. Montague, Esq., 1838, p. 171.

'constitutes the great superiority of the ancient *savants* over the modern, that the former possessed a much greater talent for apprehending general truths than the latter, who confine their attention to particular facts; and too much neglect the observation of general appearances. I trust no one will be offended if I venture to pronounce, regarding the present condition of our professional literature, that (to borrow an illustration from the logic of Kant) it is altogether cyclopic—that is to say, it wants the eye of philosophy; for although we have learned to examine particular objects with greater accuracy than our forefathers did, the sphere of our mental vision, so to speak, is more confined than theirs, and cannot embrace the same enlarged views of general objects.'¹

Listerism has revolutionised the ancient art of healing as regards the method of wound-treatment, but surgeons are often dogmatic as to the exact method of dressing a wound. Treves and Hutchinson remark²: "All surgeons endeavour to secure that the wound shall be quite clean; shall be aseptic; shall not be irritated; shall be kept at rest. One surgeon accomplishes these ends in one way, another in another, and the results are equal. He who considers that his method of dealing with a wound is the most perfect will find that his neighbour, who adopts very different details, obtains an identical measure of success.

"New antiseptic agents appear from time to time upon the scene. They are persued, are vaunted as perfect, are diligently employed, and then not a few of them fade away, some very gradually, others with the suddenness of the South Sea Bubble."

¹ Adams' Hippoc., p. 232.

² A Manual of Operative Surgery: Treves and Hutchinson; Third edition, p. 83.

"The merely scientific physician," says Dr. Clifford Albutt (a celebrated English authority on Medicine), "is apt to be blind to useful manœuvres which rest rather upon the accidental than the more permanent qualities of things." And he continues—"Prevalent opinions, though not formal truths, contain truths, and this the practical physician does not fail to perceive; nor does he forget that the observations of any person, however profound, being the observations of an individual of brief life and limited faculties, need some tampering by traditional lore—by the embodied opinions of a vast number of observers over a long period of time."

Let us consider the utility of the study of the Hindu system of medicine :

I. *Origin of Medicine* : (i) *Gods*.—The Āyurveda which forms a part of the Vedas is considered to be of superhuman origin and to have existed from eternity.¹ Though an Upaveda, the science is considered to be co-existent with the "First Teacher" who is the primary cause of the whole universe. The Āyurveda declares Brahmā to be the source of all knowledge in medicine as in other sciences. Indeed he is said to have composed the original Āyurveda in a lakh *ślokas* or verses. In the earlier epochs of the Vedas only universal deities were, more or less, in relation with medicine and disease : as the Aśvins, Rudra and other gods. But later on there were deities with definitely medical functions or pest-gods.

It is from God physician derives his light,—it is on Him he calls for succour. The origin and cessation of life manifest His power. Without help from God, no

¹ सोऽयमायुर्वेदः शाश्वतो निर्दिश्यतेऽनादित्वात् स्वभावसंसिद्धलक्षणत्वाद्वा-
वस्तुभावनित्यत्वाच्च ।

physician can be successful. Therefore the ancient Hindus regarded medical science to be of divine origin.

Russel says¹: "The Divine Founder of our Faith appeared not only in the character of a preacher, or prophet, but very conspicuously in that of a Healer, or, in fact, of a *Medical Man*,—we use the expression with all reverence. One of his appellations, that of Saviour, is translated into German, by the word Heiland, or Healer; and to the common eye of the time, his work was the curing of the sick. Most of the deeds recorded of Him in the Gospels, were instances of the restoration of health or life. That this was the impression made upon his contemporaries, appears from the letter, written by King Abargus, of Arabia, and translated out of the Syriac language by Eusebius."²

(ii) *Animals as Instructors of Medicine*.—In certain cases, the lower animals were the preceptors of men in matters of selecting food-stuffs and medicinal drugs.

This view is also found current in other countries. Schmiedeberg thinks that man has imitated the habits of animals in the detection of remedial agents. It is said that the successors of Mercury, the father of medicine in Egypt, learned the process of venesection from the hippopotamus which is said to perform the operation on itself by striking the leg against a pointed reed, taking care to direct the stroke against a vein.

"Heated animals refresh themselves in cold water, warm their stiffened limbs in the sun, and destroy irritating parasites. Cats and dogs lick their wounds; dogs eat grass to excite vomiting. A dog with a broken bone runs on three legs holding the broken one so that it may set

¹ Russel: *History and Heroes of the Art of Medicine*, pp. 71-2.

² The *Ecclesiastical History of Eusebius Pamphilius*, translated from the Greek by the Rev. C. F. Crusé, A. M., p. 32.

without appreciable shortening ; monkeys seek to check the flow of blood by application of the paw, and are adept in the extraction of foreign bodies, such as thorns..... Cases of mutual help are seen particularly in animals living a social life, such as bees and ants, the latter of which care for their wounded.....It is related that the Egyptian Ibis uses the beak for self-administration of enemata ;swallows to heal sore eyes, employ the juice of celandine ; bears to cure stomach disorders, leaves of arum ; tortoises use, as antedote to snake-bite, a variety of origanum ; stags cure their wounds with leaves of dictamnus, etc. In India, where the bitter root of ophiorrhiza mungo is esteemed as an antidote to snake-bite, the lesser ichneumon is designated by the natives as the animal from whom its qualities were learnt." (Neuberger.)

The story of Polydus who cured Glaucus, son of Minus, King of Crete, from snake-bite, by observing how a dead snake was vivified by another, is another example, but unfortunately the narrator has forgotten to inform us of the name of the herb.

Let us consider the medical attainments of animals as described by Pliny : "The hippopotamus has even been our instructor in one of the operations of medicine. When the animal has become too bulky, by continued overfeeding, it goes down to the banks of the river, and examines the reeds which have been newly cut ; as soon as it has found a stump that is very sharp, it presses its body against it, and so wounds one of the veins in the thigh ; and by the flow of blood thus produced, the body, which would otherwise have fallen into a morbid state, is relieved ; after which, it covers up the wound with mud.

"The bird, also, which is called the Ibis, a native of the same country of Egypt, has shewn us some things of a similar nature. By means of its hooked beak, it laves

the body through that part by which it is especially necessary for health, that the residuous food should be discharged. Nor, indeed, are these the only inventions which have been borrowed from animals to prove of use to man. The power of the herb *dittany*, in extracting arrows, was first disclosed to us by stags that had been struck by that weapon; the weapon being discharged on their feeding upon this plant. The same animals, too, when they happen to have been wounded by the *phalangium*, a species of spider, or by any insect of a similar nature, cure themselves by eating crabs. One of the very best remedies for the bite of the serpent, is the plant with which lizards treat their wounds when injured in fighting with each other. The swallow has shown us that the *chelidonia* is very serviceable to the sight, by the fact of its employing it for the cure of its young, when their eyes are affected. The tortoise recruits its powers of effectually resisting serpents by eating the plant which is known as *cunila bubula*; and the weasel feeds on *rue*, when it fights with the serpent in pursuit of mice. The Stork cures itself of its diseases, with *wild marjoram*, and the wild boar with *ivy*, as also by eating *crabs*, and, more particularly, those that have been thrown up by the sea.

“The snake, when the membrane which covers its body, has been contracted by the cold of winter, throws it off in the spring, by the aid of the juices of *fennel*, and thus becomes sleek and youthful in appearance. First of all it disengages the head, and then it takes no less than a day and a night in working itself out, and divesting itself of the membrane in which it has been enclosed. The same animal, too, on finding its sight weakened during its winter retreat, anoints and refreshes its eyes by rubbing itself on the plant called *fennel*, or *marathrum*;

but, if any of the scales are slow in coming off, it rubs itself against the thorns of the *juniper*. The dragon relieves the nausea which affects it in spring, with the juices of the *lettuce*. The barbarous nations go to hunt the panther, provided with meat that has been rubbed with *Aconite*, which is a poison. Immediately on eating it, compression of the throat overtakes them, from which circumstance it is, that the plant has received the name of *pardalianches* (*pard-strangler*). The animal, however, has found an antidote against this poison in human excrements; besides which, it is so eager to get at them, that the shepherds purposely suspend them in a vessel, placed so high, that the animal cannot reach them, even by leaping, when it endeavours to get at them; accordingly, it continues to leap, until it has quite exhausted itself, and at least expires: otherwise, it is so tenacious of life that it will continue to fight, long after its intestines have been dragged out of its body.

“When an elephant has happened to devour a chameleon, which is of the same colour with the herbage, it counteracts this poison by means of the *wild olive*. Bears, when they have eaten of the fruit of the *Mandrake*, lick up numbers of Ants. The stag counteracts the effect of poisonous plants by eating the *artichoke*. Wood pigeons, jackdaws, blackbirds, and partridges, purge themselves once a year by eating *bay leaves*; pigeons, turtle-doves, and poultry, with *walk pellitory*, or *helixine*; ducks, geese, and other aquatic birds of a similar nature, with the *bulrush*. The raven, when it has killed a chameleon, a contest in which even the conqueror suffers, counteracts the poison by means of laurel.”¹

¹ Pliny: Quoted in Curious Creatures in Zoology. By Ashton. Art.—Animal Medicine, p. 160.

In the Vedas, the medical knowledge is often said to be derived from the actions of animals. In the Atharva-veda, we find the animals acting as teachers of medicine. The boar, ichneumon, serpents, eagles, falcons and birds, oxen, kine, goats, sheep, and wild animals are mentioned as versed in the qualities of medicinal plants (viii. 7, 23-26). In Av. v. 13. 9, the eared hedgehog is said to have disclosed some medicine. In the prayer to the remedy for takman (fever) we find : "An eagle found thee, a wild boar uprooted thee with his snout."

II. From the study of Sanskrit medical books we get accounts of some obsolete customs, which were unknown to any other countries in ancient times, and which are difficult to comprehend in modern ages.

(i) *Viṣa-Kanyā or the Poison-girls*.—It was the custom in Ancient India to send poison-girls as presents to rival kings, who are said to have met death by their loving caresses and embraces. In the Suśruta Saṁhitā,¹ the physician in attendance on kings are cautioned against such poison-girls who are said to have been sent by enemies to murder the reigning princes :—

विषकण्ठयोगयोगाश्च वञ्जसादसूत्रः ।

तस्माद्देहेन सततं विषाद्रत्यो नराधिपः ॥

We find a reference to it in the Devi Purāṇa² where men are cautioned against the embraces of the poison-girls.

न चाविज्ञातशीलाम् स्त्रीषु भोग्यागमः कश्चित् ।

विषकण्ठाभयं घोरं पापजं श्रूयते परम् ॥

In the Mudrā Rākṣasa, we find a similar reference, where a rumour is said to have been circulated by Cāṇakya.

¹ Suśruta Saṁhitā, V. 1.

² Devi Purāṇa, Ch. IX.

to the effect that Rākṣasa had the poor Parvataka killed through a poisonous maid ¹ :

अथ तावद् द्वयलपर्वतकयोः रन्ध्रतरविनाशेनापि चाणक्यस्यापकृतं भवतीति विषकण्ड्या
राक्षसेनास्माकमत्यन्तोपकारि मित् पर्वतक इति सञ्चारितौ जगति जनापवादः ।

In the Hitopadeśa this story also occurs. It is said that the damsel was so venomous that flies alighting on her body while in perspiration instantly perished.

There is evidence that kings in ancient times tried to discover antidotes by making experiments with poisons upon criminals. Mithradates VI, Eupator (120—63 B.C.), the learned King of Pontus found out a panacea—the famous antidote, Mithradation, for all kinds of poisons. By increasing its use, he is said to have immunised himself against poison. Similarly these poison-girls habituated themselves by increasing their dosage of poison which they began to take from their infancy. They rendered themselves immune to poison but the emanations from their bodies became highly poisonous to others.

In Aristotle's "Secretum Secretorum,"² we find a curious reference to this practice of Indian kings—namely the murder of their rivals by means of maids with a poisonous body, whose contact is said to have proved fatal: "Alexander, do not entrust to women the care of the body, but if need be, only to one whom thou hast tried and found devoted to thee and to thy happiness. For thou art like a trust in their hands. Beware of deadly poison, for kings have been killed by them aforetime. And do not confide unto one man the healing of thy body, for one man can easily be seduced; and when it is possible for thee to have ten physicians, do so; do not

¹ Mudrā Rākṣasa, Ch. I.

² Aristotle's Secretum Secretorum, Book II, para. 35.—Translated by Mr. Gaster in J. R. A. S., p. 727.

follow any prescription, unless they have all come together and are of one accord. And let no medicine be prepared for thee except in the presence of them all, and joined with them one of thy trusted faithful servants, who knows the properties of drugs, their combination and proportions. Remember what happened when the King of India sent the rich gifts and among them that beautiful maiden whom they had fed on poison until she was of the nature of a snake, and had I not perceived it because of my fear, for I feared the clever men of those countries and their craft, and had I not found by proof that she would be killing thee by her embrace and by her perspiration, she surely would have killed thee." Lord Bacon also remarks¹: "And there is an old tradition of a maiden that was fed with napellus; which is counted the strongest poison of all vegetables, which with use did not hurt the maid, but poisoned some that had carnal company with her."

(ii) *Śūka-dōṣa*.—The Āyurvedic system of medicine which consists of eight divisions, has a section on *Vājikaraṇa*. It treats of the science of promoting the virile power, and notices many customs which, fortunately for the world, have ceased to exist. It is said that the people had recourse to many obscene practices to fatten and strengthen the organs of copulation. One of these methods, according to *Vātsyāyana*, was the application of *Śūka*, an unknown kind of poisonous water animal, to the penis to increase its size and strength. As the result of this immoral practice, the organ became the seat of many pathological malformations and it fell to the lot of the surgeons to treat such cases. They describe no less than eighteen kinds of morbid phenomena, some of which are said to be not amenable to treatment.

The disease Impotency seems to have been known

in the Vedic times, for in the Rv. (i. 116. 13 ; 117, 24 ; vi. 62. 7 ; x. 39. 7 ; 65. 12) Vadrīmati (*lit.* having an impotent man as a husband) seems to be the name of a woman who owed the restoration of her husband's virility to the Aśvins, and obtained a son, Hiranyahasta. The word is, however, possibly only descriptive. The hymn Av. iv. 4 is a charm to promote virility. The plant dug up for Varuṇa, shall make him full of lusty strength. It will stiffen the *pasas* as a bow. The strength of the horse, the mule, the goat and the ram shall come to him (Av. iv. 4. 8).

The use of aphrodisiacs to promote virility in man is a special feature of Āyurvedic medicine ; and this practice seems to have been known from time immemorial in India. The plant used is called *kupikacchu* (*macuma pruriens*) the cowitch. Its seeds are described as powerful aphrodisiac. This plant is dug up by Gandharvas for Varuṇa. The plant makes the organ so very full of lusty strength, that when excited, the patient will exhale heat. It infuses lusty force into men. It stiffens the *pasas* as a bowstring upon the bow.

The practice of applications of various substances to give tone to the organs of copulation was in vogue in many countries in ancient times, and still prevails in certain lands, as will be known from the study of the "Pathologica Sexualis."

(iii) *Temple-sleep*.—In ancient times, the temples of gods offered asylums for patients suffering from diseases, as in the present time, in India, when patients suffer from incurable maladies, they often go to some celebrated temples to get their diseases cured by divine aid. These temples offered suitable opportunities of examining patients, of watching the results of methods of cures, of studying the

effects of remedial agents, and of gaining experience by the temple-archives, wherein were written the histories of diseases. Such temples existed in Greece and her colonies : at Cyrene, Crotona, Rhodes, Cos, and Cnidos where the Asclapiads or the temple physicians practised their profession with renown in the earliest times. At Pergamus, a town in Asia Minor, the birth-place of Galen, there was a celebrated temple of Æsculapius. Hippocrates belonged to the temple of Cos, and Dhanvantari taught surgery at Kāśī. It is from this similarity of names of their birth-places, and from striking resemblances of the Āyurveda and the Greek Medicine, Haas propounded the theory that Dhanvantari was an adaptation of Hippocrates, and Kāśī of Cos.

“The apotheosis of Asclepius came later, and many temples were raised to him. We have record of about one hundred ; those best known to us by their surviving relics were in Cos, Pergamum, and Epidaurus. Recent excavations in Cos have brought to light remains of an Asclepian temple with cells, the base of a statue, and the foundations of a well-house. If Tricca was the most ancient of the medical temples, Epidaurus was the largest, and the mother of many such health-resorts in Greek lands. These Asclepieia, whither, as to hospitals or spas, the sick were gathered together, were situated in places of fine air, pure water, and exhilarating scenery. In or near some of them were medicinal springs. There, besides religious rites, other physical and moral influences—such as the drama, games, social amusements, diet and training, and perhaps, a few drugs—were brought to bear upon the sick in mind or body, as they are to-day at Homburg or Aix-des-Bains. At such resorts the effects of “Airs, waters, and places” and of regimen, as well as those of mental exaltation, diversion, or repose, were

keenly observed by the positive Greek mind, and the results of these more natural methods quickly distinguished from those of priestly ritual. Thus medicine found its place as a branch of natural knowledge, a place which, after Galen, the last of the great Greek physicians, it lost again till the coming of Vesalius and Harvey."¹

"Of the part taken by priests in the cure of disease we know little precisely, but much may be supposed. By pomp, splendour and ancient enchantments the senses were captured, and the springs of nervous energy unsealed; sorceries and impostures, which are apt to find their way into all great rituals, entered more or less into their system. And of such inspirations and suggestions the physicians may have availed themselves, directly or indirectly; it is alleged that mesmerism was a potent means in the hands of the priesthood. That patients were subjected to hypnotic suggestion we know with some fulness. In the age of Hippocrates it is probable that even the most sceptical inquirers harboured some belief in the supernatural origin of dreams; it is certain that dreams took a considerable part in the treatment of the sick, and that their value as means of "suggestion" was recognised down to the time of Galen. "Incubation" or "temple-sleep" was practised in the Greek temples as in the Egyptian, under the hands of the priests. In the fatal illness of Alexander his generals had recourse to it on his behalf. Incubation was by no means peculiar to the temples of Asclepius; it was practised at many other shrines; as of Apollo, Aphrodite, and Hera. The suppliants in crowds—the sexes were not segregated—their imaginations previously exalted by imposing rites, lay for sleep in the sanctuary by night. If, as we hear,

¹ Albutt: *The History of Medicine*, in *A System of Medicine* by Albutt and Rolleston, Vol. I, p. 2, 1905.

some were sleepless, the priests took care, no doubt, that they should see visions and hear prophecies nevertheless. Opium, hemlock, and some other sedative drugs were known in ancient times. In the visions the tame snakes kept in the temples played some part, as we infer from the *Plutus* of Aristophanes, from some of the inscriptions at Epidaurus, and from other testimony. Like the Delphic priestess, the priest of Asclepius also may have kept himself informed of the private concerns of the suppliants, at any rate of the more eminent of them; and we ourselves are in no position to denounce this blend of superstition, of the supernatural, and of natural and worldly wisdom, as mere quackery. Indeed, the Apolline religion may be regarded as an Ionian revolt from nature cults, gloomy, obscure, and corybantic, which then, as in other times and places, enslaved the thought and debased the passions of man. We may dwell rather on the therapeutical results obtained indirectly by the preparation for the vigils; this seems to have consisted in baths, fasting, purgation, anointings, and even bleeding: measures which had their vulgar advantages. On a larger scale, and more persistent method, these trainings, dietetics, mineral and sea bathing, and the like, fell in with the work of the physicians, and with the Greek cult of the body."¹

"The histories of the cases were recorded," says Russel,² "in three different styles; some were upon votive tablets, others were formal descriptions by literary visitors, and the third were drawn up by the physicians themselves. Of the inscriptions on votive tablets there are but four specimens extant, found on an island in the Tiber. As they are of the highest historical interest, and as we are

¹ *Ibid.*, pp. 3-4.

² Russel: *History and Heroes of the Art of Medicine*, pp. 48-49.

not aware of there being a version of them in any English work, we shall translate the German one, made by Sprengel, who also at the same place gives the original.

I. 'In these days the oracle spake to a certain blind man of the name of Gajus: he was to go to the altar and to pray, then make a circuit from right to left, lay his five fingers upon the altar, raise his hand and place it upon his eyes. Thus, in the presence of the people, loudly rejoicing, he regained his health. This manifestation of Omnipotence happened under the Emperor Antoninus.

II. 'The oracle spake to the blind soldier, Valerius Aper: he was to come and mix the blood of a white cock with honey, make an eye-salve, and smear his eyes with it for three days. He recovered his sight, and came and returned thanks to the god before all the people.

III. 'Julian appeared to be in a hopeless state after an attack of spitting of blood. The god, by means of the oracle, ordered him to come and take a pine-cone from the altar, and to eat this mixed with honey for three days. He was cured, and came and thanked the god before all the people.

IV. 'The son of Lucius, who lay hopeless with a stitch in his side, was ordered by the god, in a night vision, to come and take ashes from the altar, to mix them with wine, and lay them on the side. He was rescued, and thanked the god before all the people, and the people wished him joy.'

"It will be admitted that, if this be a fair sample of the cures recorded on the tablets, and we have no reason to suppose it is not, it would be about as hopeless to extract trustworthy observations from them as from the columns

Hundermark. *De Incrementis Artis Medicæ per Expositionem Egrotorum use in Vias Publicas et Templâ.* 4 to Lips, 1749. Quoted by Sprengel.

in the newspaper which publish the success of Professor Holloway; nor shall we find anything in the next class of much greater value."

"The most celebrated literary man of antiquity, who describes the proceedings in the temple of Æsculapius, and celebrates the cures there performed, is the orator Aristides. We find him constantly referred to, and we may estimate his fitness for the task by the following specimens taken from one of his orations. Speaking of Æsculapius, he says, 'There are that say they have been raised from death by him.' 'But also some, both men and women, lay to his account that limbs of the body have been given them by the providence of the god, their natural ones having been destroyed.' 'But to me, on the other hand, not a part of the body, but the whole body, having preserved and compacted it together, he himself has given as a gift, just as Prometheus, according to the legend, is said to have formed man.' 'And how extraordinary are the visions he sends! telling some to drink gypsum, some hemlock, some to strip naked and bathe in cold water; me, too, indeed, has he honoured in this way—curing catarrhs by river and sea-baths, and fits of prostration by long journeys; and when I was unable to breathe, ordering me to read and write.'¹

Neuberger² says: "Amid the many forms assumed by mysticism the dream-oracles were the chief; they were found mostly in places where the gods had made striking manifestation of their power and presence by strange natural phenomena, *e.g.*, near caves emitting noxious gases; on islands subject to earthquake; in the neighbourhood of hot springs. Many of these oracles acquire medical fame through cures divinely revealed in dreams: among such holy places were

¹ Aristides Orat. in Æsculap.

² Neuberger: History of Medicine, pp. 92, 94, 95.

Pluto's shrine at Acharaka in Lydia, where the dreams were sent, not to the patients, but to the priests; the miracle-working grotto of Trophonius at Lebadea in Bœotia, and particularly the ancient dream-oracle of the earth-god Amphiaraos at Oropos, which imposed on inquiring patients total abstinence of three days from wine and of twenty-four hours from food of any description. Near to this latter sanctuary was a well whose waters might be used for purification or sacrifice only by those whom the oracle had cured; in such cases it was customary to cast a gold or silver cup into the holy spring, and to dedicate images of the cured members as votive offerings to the god. These and other sanctuaries, however, were not exclusively reserved for the sick, who also might turn to any of the principal gods, Apollo, Artemis or Athene, their prayer for healing help. It was in post-Homeric times that the cult of a special god of healing arose, one whose sole office was the cure of sickness and the preservation of health.

"This was the cult of Asclepios (Ἀσκληπιός, 'Iatros,' *Ophios*, *Παιων*), whose temples formed the chief and latterly the only seats of theurgic medicine, and were held in such estimation that they survived the Olympian fall.

"It is remarkable that the Asclepios cult flourished mostly in places which, through climatic or hygienic advantages, were natural health resorts. Those favoured spots on hill or mountain, in the shelter of forests, by rivers or springs of pure flowing water, were conducive to health. The vivifying air, the well cultivated gardens surrounding the shrine, the magnificent view, all tended to cheer the heart with new hope of cure. Many of these temples owed their fame to mineral or merely hot springs. To the homely altars, erected originally by sacred fountains in the neighbourhood of health-giving mineral springs, were later added magnificent temples, pleasure-grounds for festivals,

gymnasia in which bodily ailments were treated by physical exercises, baths and inunctions, also, as is proved by excavations, living rooms for the patients. Access to the shrine was forbidden to the unclean and the impure, pregnant women and the mortally afflicted were kept away; no dead body could find a resting-place within the holy precincts, the shelter and cure of the sick being undertaken by the keepers of inns and boarding-houses in the neighbourhood. The suppliants for aid had to submit to careful purification, to bathe in sea, river or spring, to fast for a prescribed time, to abjure wine and certain articles of diet, and they were only permitted to enter the temple when they were adequately prepared by cleansing, inunction and fumigation. This lengthy and exhausting preparation, partly dietetic, partly suggestive, was accompanied by a solemn service of prayer and sacrifice, whose symbolism tended highly to excite the imagination.

"These impressions were deepened by the sight of costly votive offerings for effected cures; the tales of awe-inspiring priests who explained the inscriptions of the temple halls and described many previous miracles, excited greatest hope.

"Thus prepared and raised to a high pitch of nervous tension the patient spent one or more nights in the Hieron, at the foot of great Asclepios' statue, awaiting the healing, god-inspired dream which fancy should weave out of these late solemn experiences. For as in the Amphiarion so in the Asclepion it was in temple sleep that cures were divinely sent (Greek *ἐγχομήτης*, Latin, *incubatio*).

From inscriptions on the temple of Epidauros (with which the burlesque representations of Aristophanes, in his comedy *Plutos*, agree) we may gather that in earliest times the god himself effected the cure: i.e., that the priest, masked as the god, appeared by night (accompanied by priestesses posing as Hygieia, Jaso, etc.) and probably assisted by the putative descendants of Asclepios (Asclepiads), who were doubtless

in league with the priesthood, actually performed cures which the half-sleeping or half-intoxicated patient imagined to be dreams (binding, anointing, taking or effect of medicines).

In later times Asclepios refrained from these manual services and only indicated the cure, either clearly or symbolically, to the dreamer or his accepted proxy.

The Asclepiads, so-called descendants of the god, severed from the priesthood, or at any rate from its mysticism, ceased to take part in this simple trickery, becoming independent physicians, consenting only at the express wish of patients to carry out the inspired prescriptions.

"In the visions which required to be interpreted by skilled priests (*i.e.*, to be brought into line with their medicinal system) Asclepios enjoined mostly rational cures, such as diet, exercise in riding, hunting, or fencing, also psychical means—listening to a song, seeing a play—less often bleeding or purgatives, at times seemingly ridiculous but really suggestive measures. Success was always ascribed to the credit of the god, failure to the fault of the patient.

"The cured patient was bound to reimburse the priests and their god. In Epidaurus Asclepios once himself claimed the fee with the words, 'Thou art healed, now pay the honorarium.'

"In the ancient custom either 'Anathemata' were offered in the form of effigies, gold, silver or marble, of the healed members, or coins stuck with wax on to the thighs of the god's statue, or cast as votive offerings into the sacred spring. In many temples the cures and the means employed were engraved on the pillars or written on votive tablets of wood and stone, and hung up on posts or pillars. In honour of the god festivals were held, Asclepieia by name, consisting of musical competitions."

"There are many things connected with the healing art in which the public mind is better informed than the recognised authorities on medicine. The miracles of healing wrought at the Shrines of Saints, long the objects

of scorn and contempt at the hands of the medical profession are now declared to be well within the domain of scientific fact. The miracles of Lourdes, the faith cures at Bethsham and similar phenomena having been subjected to the strictest investigation by the most competent medical authorities, are proved to be not impostures and delusions, but simple matters of fact. Science having reluctantly accepted the Faith-cure now declares it to be "an ideal method since it often attains its end when all other means have failed."

"Its domain is limited ; to produce its effects it must be applied to those cases which demand for their cure no intervention beyond the power which the mind has over the body. That is to say faith will cure paralysis and other disorders of motion and sensation, dependent on idea, but does not avail to restore a lost organ or an amputated limb.

Professor Charcot believes that the faith-cure may cause ulcers and tumours to disappear, if such diseases be of the same nature as the paralysis cured by the same means. In all this there is no miracle." He says:—"The diseases are all of hysterical origin ; and being merely dynamic, and not organic, the mind has power to influence and cure them. The mind of the invalid becomes possessed of the overpowering idea that a cure is to be effected and it is so." M. Littré thus expresses his opinion on these forms of cure : "*The mind which is most eminently receptive of suggestion, will be the most likely to be influential in curing the body in which it is enshrined by the powerful force of Auto-suggestion.*"

Civilised men, even in modern times, have faith in the potency of religious relics. The following passage quoted from a famous Journal of medicine¹ speaks for itself. "At

this season of the year is annually witnessed the sight of thousands of pilgrims to a well-known shrine in the province of Quebec, where heretofore many questionable cures have been wrought through St. Anne, assisted by a fragment of a digital phalanx which once formed a part of that good woman's anatomy. This year a further addition of an "entire finger joint" has awakened fresh interest among "the faithful," while a branch establishment has been started at Perio, on the Gulf of St. Lawrence, where are to be found another fragment of bone and portion of her shoulder. To show that this decaying remnant of mediævalism has still a foothold in Canada, the following is taken from the *Toronto Mail* of Aug. 4th:—"Quebec, 3rd: Yesterday more than eight thousand pilgrims visited the shrine of St. Anne, and a girl named Cote, of St. Paul de Montmapny, who was carried into the church in a lethargic state, lame and dumb, walked away after communicating, apparently perfectly cured."

"In the *Journal de Chimie et de Pharmacie*, Professor B. Dambergis of Athens gives interesting particulars as to the treatment of patients in the Asklepeia of antiquity, especially at the famous shrine of Epidauros. In some at least of the temples the springs were of medicinal character. Analysis of certain of the waters has shown that they are similar in composition and properties to those which are nowadays found to be beneficial in the treatment of gallstones and of disorders of the digestive tract. The old temples of Asklepios were therefore, to a large extent, places to which patients were sent to drink the healing waters and bathe in them: the results are, therefore, by no means wholly to be ascribed to the influence of suggestion or mysticism."¹

In India, we still find similar temples at Kalighat, Tara-keśvar, Baidyanāth, Benares, and other sacred places, where patients suffering from diseases which have been found to be not amenable to treatment, go in number to get themselves cured. There they bathe and pass through many religious ceremonies, observe fastings, lie for days together prostrate on the ground, and pray for the god's mercy. Generally they get medicines in their hands in their dreams; often they are directed to proceed to some place or to some men to get their medicines. There are authenticated accounts of cures in some cases, though here, as in our medical practice, failures are attributed to the faithlessness, or impurity of patients and are lost sight of, while occasional cures are narrated to patients by the priests in an exaggerated form. Votive offerings made of gold, in the shape of tongue, hands, feet, etc., are often offered to the goddess Kālī, when the patients get any relief from distressing symptoms of diseases.

III. *Therapeutic Measures.*—(i) "The immovable apparatus" of the Greek and Arabian surgeons, as improved by Seutin, Dieffenback, and others, gives us great advantage in dealing with fractures. We find such methods described in the medical books of the Hindus centuries before they were known to the Greeks and Arabians.

The patent rattan cane splints, recently adopted in the European army, owes its origin to the bamboo splints recommended in Sanskrit medical books, and used by the Hindu surgeons in their practice from ancient times. Many of the ideas re-discovered and appearing from time to time as new and original, can be found to date back to the ancient Sanskrit works on the art of healing, and particularly in surgery. "In my own personal experiences amongst primitive races," says Mr.

Wellcome,¹ "I have sometimes found traces of the origin of what are usually regarded as entirely modern discoveries. Some things have been discovered in remote ages and lost, forgotten, and re-discovered. Some ancient discoveries have continued in use through all the ages. Dr. Reisner, in the course of archaeological excavations in Nubia, found some well made bamboo splints, dating, I think, some 2000 or 3000 years B.C. Captain Anderson found similar splints in use in the Southern Sudan some years ago, and I myself have seen them in use in the Upper Blue Nile region. A few days ago in Morocco City, Southern Morocco, I saw exactly similar splints being used, and secured them for this museum. The perpetuity and the re-discovery of ancient devices are exceedingly interesting subjects for investigation."

(ii) *Massage*.—Massage is now one of the recognised therapeutic measures useful alike in medical and surgical practice. "The beneficial results of such manipulations," says Despard,² "were well known to the inhabitants of Eastern countries and ancient documents testify to the fact that massage was practised by them many years before the birth of Christ. We read that at the commencement of the Christian era, as well as antecedent to that time, celebrated Greek and Roman physicians prescribed the treatment for their patients, and that Plato classified the movements as being either active or passive. Massage is known to have been employed on the continent for some centuries, but its practice in England dates only from the beginning of 1800. The present system owes much to Professors Ling, Mezger of Amsterdam, Von Mosengeil, Klien, and others. Professor Ling was a

¹ Speech by Mr. H. S. Wellcome at the opening ceremony of Historical Medical Museum, p. 23.

² Text Book of Massage. By L. L. Despard, London, 1911.

native of Sweden. He lived 1776—1839, and it was he who elaborated the "Swedish Medical Gymnastic" system and introduced it in Stockholm in the year 1813."

Shampooing or Massage is an oriental Institution and is still in vogue in India. This practice "may be assimilated by every one with benefit. By its adoption circulation is quickened and muscles exercised with a minimum of stimulation of the nervous system. The process is grateful and exhilarating. It is usually at least among Europeans—carried out just after the morning exercise, before taking the bath, and before going to sleep; but when during great heat, the lower extremities ache from a sluggishly-conducted circulation, and there is a sense of weariness, it may be had recourse to with benefit at any period of the day or night. The kneading and rubbing is conducted quickly and vigorously by a servant, called a bearer, from below upwards, until almost every part of the body, anteriorly and posteriorly, has been thoroughly subjected to the process. The legs and arms may be shampooed in the sitting posture; but the recumbent and decumbent positions are needed when the entire body has to be overhauled. The ayah, or female servant, performs this service for European ladies."¹

(iii) *Hypnotism*.—The Hindus at a very early period seem to be acquainted with the obscure phenomena, called Mesmerism at the present day, after its exponent F. A. Mesmer who in 1778, convulsed the civilised world by his wonderful cures of diseases by this mysterious agency. The various modes of procedure employed by the western mesmerists to induce the hypnotic state *viz.*, staring fixedly at an object, gazing steadfastly into

¹ The Book of Health. Edited by Malcolm Morris: Art.—Health in India, by Sir J. Fayrer and J. Esart, p. 930.

another's eyes, Luy's revolving mirror, and mesmeric passes,—were known to the Hindus. Various methods are described in the Tantras for throwing a man into a trance by methods similar to mesmeric passes. Prof. Crookes in his Presidential Address at the British Association of Science has admitted that the force manifested in the phenomena of Spiritualism “exists outside our scientific knowledge and is exercised by intelligence differing from the ordinary intelligence common to mortals.”

(iv) *Exercise*.—Breathing exercises are prescribed in the Yoga systems. This method is well worth trying especially in combination with other therapeutic measures. Dr. Reimers testifies the value of this method of treatment in acute nasal catarrh.¹ He has them carried out regularly two or three times a day, near an open window, and testing in each case for about five or ten minutes. With the exercises he combines simple gymnastic drill, and in many cases the joint treatment results in an increased potency of the air passages.²

The following remarks are worthy of notice:—
“If Europeans cannot adapt their mode of life to a tropical climate but must indulge in habits totally incompatible with such a climate, they should at all events endeavour to convert their food into wholesome nutriment, and preserve the robustness of their frames by practising athletic exercises, in the cool of the day, and wrestling in imitation of the Puh'lwans. It is indisputable that these individuals enjoy an immunity from disease, unknown by others. There are none whose constitutions resist the exciting causes of disease so well although blood is abundant and their vascular system vigorous. The few

Europeans who have entered thoroughly into the spirit of these exercises return to their native land with vigorous constitutions capable of really enjoying their native country.

"The writer has long admired and practised the calisthenic exercising of the Asiatics, and attributes a better state of health and stamina, and a capability for active pursuits, far superior to that enjoyed by him in England, to a systematic use of these exercises.

"In the Governor General's Body Guard there is a very good specimen of a gymnasium amongst the troopers, some of whom are very well developed athletics, among the old and most respectable hands."

For exercise Mr. Brett thus recommends: "The 'Moogdurs' the 'Dund'h' and the 'Lézum,' are the best kind of exercises for general use in India, though it would be well for a young man to go through the whole system at first under a regular 'Puh'lwan' and afterwards continue the Moogdurs, Dund'h and Lézum in moderation, as a high degree of artificial training may be carried too far; excess even in what is good, is to be avoided. Nothing is so conducive to a perfect capillary circulation, to the healthy action of the liver and of all the secretions, the tone of the stomach and the sthenic state of the nervous and muscular system enabling us to bear up against a long and sultry day. Friction and shampooing should not be omitted."¹

IV. *Indigenous Drugs.*—There is a mine of drugs in this country. These are easily available and do not cost much. If the indigenous drugs are carefully worked out by men of special training, the result would be

productive of great good to the human race. There is a great need for a pharmacological laboratory in Calcutta, where many new drugs possessing a variety of properties may be scientifically investigated with a view to test their efficacy on manifold diseases. The Sanskrit medical books are replete with the names of various medicaments. Such curative agents are still being used by the Āyurvedic physicians with success. The properties attributed to them require to be verified by us, before we accept or discard them in our practice. There are illustrations of the oft-repeated cases of wonderful remedies now most highly vaunted, a short time later discarded as useless, only to be resuscitated at some future date as new discoveries. "By a study of the history of therapeutics, by a knowledge of the vicissitudes of fashion in the use of therapeutical agents, a lesson might be learnt teaching caution in the acceptance of new and much vaunted remedies, which might of themselves be of value, but come to be viewed with suspicion by the more cautious and sagacious members of the profession. Dr. Gairdner rightly deprecated the "booming" of new remedies, but naturally, did not propose the rejection of a remedy because it was new."¹ Dr. Snowman² justly remarks : "Amid all that is new, clamouring for trial and all that is old still claiming recognition we may aptly adopt as our line of practice an apposite couplet from Pope :

" Be not the first by whom the new is tried
Not yet the last to lay the old aside."

Systematic investigations of the natural vegetable products of India can hardly fail to lead to the utilization of a

¹ B. M. J., Vol. I, 1891, p. 972.

² Clinical Excerpts, Vol. XVI, p. 113.

considerable number of drugs, whose therapeutics are at present unknown to us. In some instances valuable results may be obtained and the commercial and economical value of such investigations is very great.

India possesses one of the greatest drug-yielding regions in the world. Her inexhaustible forests include those of all climatic zones between sea level and the upward limit of tree growth. Oil-bearing seeds, valuable dyes, fibrous plants, varnish resins, tropical fruits, tea and its associates, take high rank among the best in the world.

Norman Cheevers thus writes on the subject of the *Materia Medica* of India in his famous *Commentary on the Diseases of India*: "This is a subject upon which the Indian physician ought to acquire considerable practical knowledge; but it is a matter which lies outside the object of this commentary. Native medical men and patients constantly speak to us of various native remedies with which we ought to be, at least, acquainted, and several indigenous drugs, such as opium, castor oil, ginger, alum, kat-kalija, atees, gurjun balsam, gulancha, ununtamool, chiretta, bael fruit, babul bark, neem leaves for fomentation, mustard oil for liniments, sola for corks, Madras fish oil, telini fly, etc., are frequently used in our own practice. The medical authorities insist upon the free use of indigenous medicines in dispensary practice; but here it is needful to remark that, if we are not careful to disguise the appearance and flavour of bazaar medicines, our dispensary patients are apt to accuse us of giving them common drugs and of reserving our best medicines for the rich.

"It has occurred to most of us, when our supply of European drugs has run short at a remote station, to be compelled to fall back upon bazaar medicines. When I

first went to India, we were allowed very little quinine, and had to use bark-powder in our jail and sepoy hospitals. At Chittagong, my supply of bark having run out, and intermittent fever of moderate severity being extremely prevalent, I used the powder of the seeds of kat-kaliya, *Cesalpinia Bonducella* (average dose, twelve to fifteen grains), in cold infusion of chiretta, for several weeks with perfect success. It is related of Dr. William Pitt Muston that, having under his charge 1,500 sick in the force employed against the State of Gopud in 1805, and being without the usual supply of medicine, he relied, 'and with complete success,' on the materia medica of the Gwalior Bazaar.¹

"My friend Dr. Waring has brought out three editions of a work which ought to be in the hands of every medical man in India. It is entitled 'Remarks on the Uses of some of the Bazaar Medicines and Common Medical Plants of India,' and is published by Churchill. In this book we are taught, by the highest authority on the materia medica of India, how the drugs commonly procurable in Indian bazaars may, in remote parts of that country, be made sufficient for the treatment of all ordinary diseases if the practitioner be also provided with these *nine* medicines:—Quinine, powdered Ipecacuanha, Calomel, Santonin, Bromide of Potassium, Acetate of Lead, Blistering Fluid, Liquor Ammonia, and Carbolic Acid.² The means of

¹ The harm which the absence of mercurials prevented the worthy doctor from doing must not be left out of consideration in estimating the good which the use of bazaar medicines doubtless wrought upon his sick.

² The practitioner ought to make his own blistering fluid from the country telini fly, *Mylabris cichorii*; if I had my Indian career over again, I would willingly dispense with calomel and acetate of lead.

studying this very important subject more deeply are afforded in the *Pharmacopœia* of India also prepared by Dr. Waring under the authority of the Secretary of State for India; in the learned and most carefully prepared work of my friend Odoy Churn Dutt, on the Sanskrit *Materia Medica*; and in that great storehouse of Indian pharmaceutical lore, Sir William O'Shaughnessy Brooke's '*Bengal Dispensatory*.'¹

It seems strange that the study of the indigenous drugs, though so important to a physician in India, finds no place in the curriculum of studies prescribed as Syllabus for the Examinations of our Universities. The introduction of the indigenous products of India into European practice in India has not been realised. 'If they are ever to come into general use in hospitals and dispensaries throughout India, it is to the medical colleges and schools that we must look in the first instance. It is there that a correct knowledge of them should be first instilled; that the student should become familiarized with the articles themselves; that he should be made acquainted with their physical characters and medicinal properties; and it is there, during the period of student life, that he should become practically instructed in their employment in the treatment of disease. On the value of knowledge thus gained, it is impossible to place too high an estimate, familiarizing, as it will, the embryo practitioner with remedies which are at hand in the remotest corners of our Indian empire, rendering him in a great measure independent of costly imported articles, and effecting a considerable annual savings to the State.'²

¹ Chevers: *A Commentary on the Diseases of India*, p. 25.

² Waring: *Pharmacopœia of India*, 1868, pp. ix-x.

INTRODUCTION

95

I have collected from various sources the following :

*Table of Substitutes, useful in the event of any deficiency
in the usual Medicines.*

<i>Pharmacopœial Medicine.</i>	<i>Substitutes :—Country Medicine.</i>
Linseed Poultice	... Nuteeya, or Neem-leaf Poultice.
Linseed Meal Poultice	... Rice Flour Poultice.
Conium Poultice	... Dhatura Poultice.
Mustard Poultice	... Get Kuchoo, or Lal Chitra Poultice.
Yeast Poultice	... Toddy Poultice.
Cerate of Cantharides	... Cerate of Telini Flies.
Decoction of Iceland Moss	... Decoction of Gulancha, Ceylon Moss.
Compound Decoction of Barley	... Decoction of Oryzie or Ispaghool.
Decoction of Oak-bark	... Decoction of Rohun, Acacia Arabica, Pomegranate Bark.
Plaster of Cantharides	... Plaster of Telini Flies, Plumbago Rosca.
Extract of Bark	... Extract of Barberry Bark.
Extract of Gentian	... Extract of Chiretta, Justicia or Kreat, Gulancha or Palo, Kurroo.
Extract of Liquorice	... Extract of Abri or Goonch.
Extract of Logwood	... Extract Dyospyri or Gab, Japan wood, Nemooka, Sappan wood.
Extract of Jalap	... Extract of Kaladana.
Extract of Poppy	... Extract of Hemp.
Infusion of Cusparia	... Compound Infusion of Sohunjana.
Infusion of Gentian	... Infusion of Bel, Chiretta, Gulancha, Kreat, Kurroo, Pata, Ununtamool,
Infusion of Ipecacuanha	... Infusion of Banopsha, Crini, Kanpor.
Compound Infusion of Linseed	... Infusion of Pedalium, or Gokeroo.
Infusion of Serpentry	... Infusion of Ajapana.
Compound Gambooge Pill	... Pilula Kaladana.
Ipecacuanha Powder	... Compound Powder of Madar.
Syrup of Sarsaparilla	... Syrup of Ununtamool or Chobchinee.
Tincture of Catechu	... Tincture of Myrobolan.
Compound Tincture of Bark	... Tincture of Barberry, Toddalia.
Tincture of Colchicum	... Tincture of Hermodactyl or Soorinjan tulk.
Tincture of Cubels	... Compound Tincture of Gurjun.
Tincture of Gentian	... Compound Tincture of Chiretta.
Tincture of Jalap	... Tincture of Kaladana.
Tincture of Hop	... Tincture of Mishme Teets, Gulancha.
Tincture of Myrrh	... Tincture of Mugrela.
Tincture of Opium	... Tincture of Hemp, Dhatura.
Ointment of Elemi	... Ointment of Gunda Biraza.
Ointment of Nitrate of Mercury	... Ointment of Chakoor, Chalmoogra, Compound Cinnabar, Daod mur- dun, Sal Ammonic and Borax.
Calamine Cerate	... Compound Ointment of Myrobolan.
Resin Plaster	... Plaster of Gum Kahrubah.
Fresh Lemon Peel	... Dried Lemon Peel (in preparation of Compound Infusion of Orange Peel, Compound Infusion of Gen- tian, Syrup of Lemon and Tincture of Lemon.)

*Pharmacopœial Medicine.**Substitutes:—Country Medicine.*

Lard	...	Hard Soap, Prepared Suet, Resin, or Yellow Beeswax (in preparation of the plasters).
Bitter Orange Peel	...	Indian Orange Peel.
Olive Oil	...	Arachis Oil or Sesame Oil in preparation of Hard Soap, Liniments, Ointments, and Plasters.
Benzoated Lard	...	Benzoated Suet.
Oil of Theobroma	...	White Beeswax (in preparation of Suppositoria). Kokum Butter, for Unguenta.
Mylabris Phalerata (Beetle)	...	Telini fly and other Species of Mylabris in preparation of Blistering Liquid of Mylabris, Warming Plaster, Mylabris Plaster and Vinegar.
Mucilage of Gum Acacia	...	Mucilage of Indian Gum.
Gum Acacia, Gum Arabic	...	Indian Gum, Gum of Wood-Apple Tree.
Catechu	...	Black Catechu, Gab.
Kino Gum	...	Butea Gum (Palas).
Culumba	...	Gulanha, Mara Manzil (Tamil), Coscinum Fenestratum, Trichosanthes Cordata.
Podophyllum Peltatum	...	Indian Podophyllum.
Horse radish	...	Root of Morniga Pterygosperma, So-hunjuna.
Male Fern	...	Pomegranate Root-bark, Kamala.
Official Sassafras	...	Nepal Sassafras.
Barbadoes Aloes	...	Indian Aloes.
Socotrine Aloes	...	Barbadoes Aloes.
Siam Gamboge	...	Indian Gamboge.
Spermaceti Ointment	...	Kokum Butter.
Copaiba	...	Balsam Gurjun, Liquid Storax, Sandal Oil.
Pine Resins	...	Dammar.
Sulphate of Quinine	...	Karanjwa Powder.
Quinine	...	Bark of Baobab, Sulphate of Beberia.
Ruta Graveolens	...	Ruta Angustifolia.
Jamaica Quassia	...	Bharangi, Kariyat.
Almond Oil	...	Oil of Java almonds (in Mistura Amygdalæ), or Country almonds.
Myrrh	...	Gugul.
Burgundy Pitch	...	Black Dammar.
Cinchona	...	Bark of Cedrela Toona (Roxb.) Barberry, Atis, Nim Bark, Alstonia Bark, Rohun Bark.
Extract Colocynth	...	Extract Cassia Leaves, Indrayan.
Galls	...	Myrobolans (in lotions, injections, etc.) Kakra-Singhi.
Common Fennel	...	Panmuhuri.
Ipecacuanha	...	Mudar, Kurchi, Tylophora Asthmatica (in Dysentery) Crinum Juice (Emetic and diaphoretic).
Compound Powder of Jalap	...	Compound Powder of Kaladana.
Datura Stramonium, Belladonna	...	Dhatura Abba,

Pharmacopœial Medicine.

Sarsaparilla, Dulcamara ...
 Guttapercha tissue ...
 Official Squill ...
 Cod-liver Oil ...
 Acacia Catechu ...
 Proof Spirit ...
 Santonica ...
 Serpentaria Root ...
 Oil Cajuput ...
 Oil of Lavender ...
 „ Peppermint ...
 „ Thyme ...
 „ Dill ...
 „ Caraway ...
 „ Coriander ...
 „ Anise ...
 Turkey Opium ...
 Valerian ...
 Common Dill ...
 Pimento ...
 Black Pepper ...
 Tragacanth ...
 Senega ...
 Aconite ...
 Ergot ...
 Alexandrian Senna ...
 Elaterium ...
 Turkey Rhubarb ...
 Lemon Juice ...
 Oil of Nutmeg ...
 Mezereon Bark ...
 Wine, Brandy, Proof and Recti-
 fied Spirit. ...
 Cascarella Bark ...
 Wooden Splints ...
 Lard ...

Substitutes:—Country Medicine.

Fresh Hemidismus root.
 Young plantain leaf.
 Scilla Indica, Crinum root.
 Coconut Oil, Shark-liver Oil.
 Betel Nut Catechu.
 Arrack from Palmyra or Coconut
 Palms.
 Palas Seeds, Juice of Papaya, Mango
 Seeds, Veronica Seeds.
 Aristolochia Indica Root.
 Lemon Grass Oil.
 Ajwain or Omum.
 Patna Opium.
 Valeriana Hardwicki, Nardostachys
 Jatamansi.
 Sowa.
 Cloves.
 Long Pepper.
 Kutira Gum.
 Muktajluri (Acalypha Indica), Bakas.
 Aconite Ferox, Bish.
 Indian Hemp.
 Tinnivelly Senna.
 Croton Oil.
 Himalayan Rhubarb.
 Lime Juice.
 Concrete Oil.
 Plumbago Bark.
 Mahwa Spirit, Arrack.
 Michelia Champaka bark.
 Areca petioles, Bamboo.
 Shark-liver Oil.

“While, of course, of the immense number of plants used as drugs by the natives of India, a large number are known to be perfectly worthless, still it must be admitted that our ignorance of the properties and uses of the indigenous drugs is scarcely pardonable. It seems highly desirable that the whole subject should be gone into with greater care than has yet been done, both with the view of weeding out the worthless from the good and of preparing the way for a number of the better class native drugs

taking the place of some of the more expensive and imported medicines of Europe. It seems remarkable that so large an amount of aconite should be collected in Nepal and exported to Europe in order to be reimported into India before it can find its way to the poor people who crowd around our dispensaries. Illustrations of a similar nature might be multiplied indefinitely; *Atropa Belladonna*, the Deadly Night-shade, for example, is a common weed on the Himálaya from Simla to Kashmir, yet every ounce of the drug used in India is imported from Europe, the Indian plant having apparently been entirely overlooked."¹

ARTICLES OFFICINAL IN THE PHARMACOPŒIA OF INDIA

NOT CONTAINED IN THE BRITISH PHARMACOPŒIA.²

- Aconitum ferox*, *Wall.* Root. Vish.
Aconitum heterophyllum, *Wall.* Root. Atis.
Coptis Teeta, *Wall.* Root. Mishmi Tita.
Tinospora cordifolia, *Miers.* Root and stems. Gulanca.
Berberis Asiatica, *D.C.*; *B. aristata*, *D.C.*; and *B. Lycium*,
Royle. Root-bark. Rasot.
 Narcotine.
Sinapis juncea, *Linn.* Seeds. Rai.
Gynocardia odorata, *R. Br.* Seeds. Chaulmugra.
Garcinia pictoria, *Roxb.* Gum-resin. Indian Gamboge Tree.
Garcinia purpurea, *Roxb.* Oil of the seeds. Kokum Butter.
Dipterocarpus lævis, *Ham.* Balsamic exudation. Gurjun.
Hibiscus esculentus, *Linn.* Capsules. Okra.
Citrus Bergamia, *Risso.* Juice of the fruit. The Lime tree.
Toddalia aculeata, *Pers.* Root. Lopez root.
Boswellia floribunda, *Endl.* Gum-resin. Ganda-biraja.

¹ Official Report of the Calcutta International Exhibition, 1883-84, pp. 316-17.

² Pharmacopœia of India, 1868. pp. xv.-xvi.

- Azadirachta Indica*, *Juss.* Bark and leaves. Nim.
Soyimida febrifuga, *Juss.* Bark. Rahun.
Mucuna pruriens, *D.C.* Legumes. Cowhage.
Acacia Catechu, *Willd.* Extract of the wood. Khadir.
Cæsalpinia (*Guilandina*) *Bonducella*, *Linn.* Seeds. Bondue.
Butea frondosa, *Roxb.* Inspissated juice. Palas.
Abrus precatorius, *Linn.* Root. Goonch.
Arachis hypogæa, *Linn.* Oil of seeds. Ground nut.
Carum (*Ptychotis*) *Ajowan*, *D.C.* Fruit. Jowan.
Hydrocotyle Asiatica, *Linn.* Leaves. Penny-wort.
Diospyros Embryopteris, *Pers.* Fruit. Gab.
Punica granatum, *Linn.* Rind of fruit. Pomegranate.
Alstonia scholaris, *R. Br.* Park. Chatin.
Calotropis gigantea, *R. Br.*; and *C. procera*, *P. Br.* Root-bark. Mudar.
Tylophora asthmatica, *W. et A.* Leaves. Antamul.
Pharbitis Nil, *Choisy.* Seeds. Kaladana.
Andrographis paniculata, *Nees.* Stalks and roots. Kariyet.
Datura alba, *Linn.* Leaves and seeds. Sādā Dhutura.
Plantago Ispaghula, *Roxb.* Seeds. Isapgul.
Crinum Asiaticum, *Herb.* Bulbs. Kanoor.
Oryza sativa, *Linn.* Seeds. Rice.
Andropogon citratus, *D. C.*; *A. Nardus*, *Linn.*; and *A. pachnodes*, *Trin.* Volatile oil. Gandha bena. Kamá-khér.
Gracilaria lichenoides, *Greville*, and other species. Dried plant. Ceylon Moss.
Mylabris Cichorii, *Fabr.* Dried insect. Telini Fly.
Squalus Carcharias, *Linn.* Oil obtained from the liver of the White Shark.

V. *Identification of Diseases*: A study of Indian Medicine may lead to a better identification and description of such diseases as are unknown or uncommon in Europe.

(i) Let us take the example of Leprosy. We find the various forms of the disease in its different stages, more commonly in India than elsewhere. The disease is fully described in Sanskrit books. So it is important that we should study the Sanskrit medical works with an open mind, ready to accept their experience, their description of the disease and their alleged methods of cure; we should have as our motto:

“Prove all things, and hold fast what is good.”

In the Review of “The Transactions of the Medical and Physical Society of Calcutta, Vol. I.,” the Editor of *Lancet* remarks:¹ “It is probable that the imperfect science of the *Baids* or *Hakeems* of India cannot furnish much instruction to the practitioners of Europe, but liberal and cultivated minds will welcome the light that may be thrown upon the past and present state of oriental medicine, by the labours of the industrious and the learned, whether their information be derived from authentic sources or actual observation. The history of Mahomedan medicine, comprising the most flourishing periods of the schools of Bagdad and Cordova, has been pretty fully elucidated, but fails with the decline of the power of the Caliphs; a long subsequent period in this branch of inquiry is therefore involved in obscurity, and the medical history of the Hindus in an utter blank. In these respects, therefore, there is ample scope for investigation, which may be presecuted with every advantage in the country in which the Society is with so much judgment established. To the oriental nations we owe the introduction of many simples into medicine, which were unknown to the Greeks and Romans, such as manna, senna, tamarinds and rhubarb, besides musk, nutmegs, cloves, etc.; and in modern times, the madar,

¹ *Lancet*, Vol. X, p. 133, 1826.

croton oil, etc. Hence it is not improbable, that many valuable remedies may yet be culled from the *Materia Medica* of the East; but if no accessions of value be derivable from that source, a vast store of knowledge, important equally to physiology and pathology, may be collected and rendered subservient to the healing art. That much may be done, is proved by the present volume of transactions, which, although the Society has been so recently established, contains many papers of sterling value, of these we shall now proceed to give some account. The first is an elaborate dissertation on "*Kushta*, or Leprosy, as known to the Hindus," by H. H. Wilson, Esq. This formidable and loathsome disease, as it occurs in India, is well adapted for medical research, as its nature is uncertain, and its treatment undefined. The talent of Europe has been baffled by the want of experience, which nothing but actual observation can convey. There is an ample field, therefore, for the Indian observer, who has numerous opportunities of examining the disease under all its forms, and in all its stages. Under these circumstances, we trust this Society will remove the reproach to medical science, and indeed it is a reproach, that so little is known of the subject."

"We are indebted," says Brett,¹ "to the Hindoos for almost every efficacious remedy in this disease." He makes selections from numerous compounds mentioned in Sanskrit books. These have been tried by many able European practitioners in India, and their efficacy rests on the most unquestionable authority.

In India, the Chaulmoogra oil has long been used externally by the Āyurvedic physicians from ancient times.

F. H. Brett. A Practical Essay on some of the Principal Surgical Diseases of India, 1849.

The fruit and seed have also been used internally in leprosy.

Sandes¹ of Robben Island is satisfied that chaulmoogra oil is superior to any other known remedy or reputed cure of leprosy. The oil is not successful in every case—it certainly cannot be called a specific. But he is satisfied that 40% patients improve under the treatment. The oil should be given for five years or more and in the largest possible doses. Engle Bey has prepared for him 'antileprol,' a purified form of the oil. He found benefit from its use in many patients. The researches of Sir Leonard Rogers prove that Sodium Hydncscarpate (Sodium Gynscardate A) is a highly useful remedy in Liprosy.

(ii) *History of Cholera*.—The modern history of Cholera begins from 1817 when it appeared in Jessore and soon ran its pandemic course within two years over the whole world. Since then the disease never entirely disappeared from us—at times it attacks its victims sporadically, at others running as a terrible scourge counting its victims in thousands. But it seems strange that the English physicians considered the disease as a novel one. Had they been learned in medical history they would have known that the disease was known to Celsus in A. D. 262, to Sydenham in 166', and to the Ayurvedic Physicians Caraka and Susruta about 1000 years B.C., who describe it as Visucikā. The Chinese writers (5th century B.C.) mention it as Ho-louan; Hippocrates speaks of it as *χολερα*. The Arabic physicians applied the term Haíza to cholera, and this word is in common use in India at the present day.

Fayrer² says: "There is abundant evidence to show that the disease has been well known and described since

¹ Journal of Tropical Medicine and Hygiene, March 1, 1912.

² Natural History and Epidemeology of Cholera, p. 11.

the very earliest periods of history, nor is there anything in this record to prove that its origin is to be traced to India alone."

Doubts have been expressed as regards the identity of Cholera as we now find it and Visūcikā as described in the ancient Sanskrit writings. In the second Annual Meeting of the Buddhist Text Society, extracts were read from a Buddhist work, where the name Visūcikā occurs. In one case it followed after eating a rotten radish and frequent drinking of foul water on the way; in another, the disease attacked a Brahmin who greedily ate the various dainties that were served at the table. In the discussion that followed, the following supplementary remarks on the disease (*Visūchikā*) referred to above, were made. I quote the remarks here:

"A few passage from the most ancient authorities on Hindu medicine with their literal translation in English, will show that cholera, in the form it now exists, was unknown in ancient India.

To quote from *Charaka Vimansthān—Chapter II.—*

"Physicians have divided the disorders of the stomach into two classes, *Visūchikā* and *Alasaka*, according to the condition of the bowels. In *Visūchikā*, there is an upward and downward flow, i.e., a vomiting and purging. When there is excess of wind in this disease, gastrodynia, suppression of urine, bruising pain all over the body, dryness of the mouth, fainting, forgetfulness, loss of appetite, contraction of tendons, and suppression of stools will take place. When bile becomes predominant, fever, diarrhoea, burning sensation of the body internally, thirst, forgetfulness and delirium will supervene. In the case where phlegm is predominant, fever ushered in by chill (ague) *malaise* and heaviness of limbs will be the marked symptoms."

To quote from—*Sūtrata Uttaratantra—Chapter 56.—*

"On account of indigestion the wind becomes irritated and produces a painful sensation in the body of the patient like that of the pricking of needles. Owing to this physicians call this disease *Visūchikā—Sūchikā*

meaning a needle. Men versed in the Śāstras, learned people, and moderate eaters seldom suffer from *Viśūchikā*. Greedy people, and those who have no control over their desires, get this disease. In *Viśūchikā* the following symptoms appear:—Fainting, diarrhoea, vomiting, thirst, gastrodynia, forgetfulness, cramps, yawning, bruising sensation all over the body, discoloration of the skin, shivering pain in the cardiac region, and weakness of the head. If the teeth, lips, and nails of the patient become yellowish-brown; if there is no sense whatever; if the vomiting is too severe and eyes sunk into their sockets; if the voice is very low-pitched and the joints seem to be loose, then there is no hope for his recovery."

According to *Babhata-Sūtrathān Chapter 8*.—

"People, who have no control over their desires, by stuffing their stomachs with unripe and indigestible food, bring on *Alasaka* and *Viśūchikā* upon themselves. These are due to the pressing and consequent agitation and irritation of the wind, bile, and phlegm in the stomach. In the latter of the two diseases, the wind being irritated, several kinds of pain, like the pricking of needles, are produced, and hence the name of the disease (*Viśūchikā*).

"In *Viśūchikā*, where wind is predominant, there is gastrodynia, shivering, suppression of urine and stools. Where there is pre-excess of bile, there is fever, profuse diarrhoea burning sensation of the body, thirst, fainting, etc., etc. In the case where phlegm is predominant, there will be coryza, heaviness of the limbs, loss of speech, and flowing in of saliva."

"From the above illustrations it will be seen that the symptoms of *Viśūchikā* do not exactly coincide with the symptoms of Cholera. Dr. Macnamara in his treatise on Asiatic Cholera quoted certain passages from *Suśruta* to establish his view about the Indian origin of cholera, but at last he was doubtful if the description corresponded with the symptoms of the cholera of our age. He observed—quoting from *Suśruta*:—"The patient is attacked with vomiting; purging, faintness, thirst, pain in the abdomen, yawning, forgetfulness, burning heat in the stomach, duskiness of the surface of the body, pain in the head and heart." The worst symptoms are "blueness of the gums,

lips, and nails, diminution of the senses, coldness of the body, sunken eyes, suppressed voice, a feeling of complete lassitude ;' but 'if burning of the palms of the hands, and body, accompanied with sharp vomiting" occur, the patient is likely to recover ; and 'should he digest his food all danger is passed,' the patient obtaining immediate relief, the purging stops and he is in comfort. If this description refers to cholera, says Dr. Macnamara, 'the disease must have been in existence for many centuries.'

"Dr. Mahendralal Sircar in the *Calcutta Journal of Medicine*, of June and July 1883, proved by indirect evidence, quoting several ancient Hindu and Tibetan authorities on the subject, that cholera was not of Indian origin.

"I must conclude in the language of Dr. Sircar : 'Was *Visūchikā* the primitive parent of cholera ? Is there evolution in disease as there is in animated nature ? This is a question well worth a most careful and searching investigation ; for if solved in the affirmative, it will open entirely a new field for hygiene and therapeutics.'"

N. B.—*Kavirāj Bijoyratna Kavirāṇjan*, a distinguished medical authority of Bengal, is of opinion that *Visūchikā* was a form of diarrhoea, which took the place of cholera in ancient India. He has very kindly sent me the following extracts from *Charaka* and *Sūśruta* medical works, in support of his views on the subject :—Ed.

विमूचिका ।

तं द्विविधमाम-प्रदोषमाचक्षते भिषजो विमूचिकामलसद्यः ।
 तत्र विमूचिकामूर्च्छायाश्च ग्रहणामदोषां यद्योक्तद्वयां विद्यात् ॥
 तत्र वातः श्लानाद्वाङ्मर्दसुखशीघ्रमूर्च्छा ।
 अमाग्निवैषम्यं सिराकृश्नसंस्तम्भानि करोति ॥
 पित्तं पुनर्ज्वरातिसारान्तर्द्वाहलक्ष्णमद्वयमप्रलपनानि ।
 ओषा तु च्छर्द्दोचका विपाकशोतज्वरालस्रागावगौरवाणि ॥
 (चरक विमान-स्थाने २याध्यायः) ।

सूचोभिरिव गावाणि तुदन् सन्निहतेऽनिलः ।

यद्य्राजीर्णेन सा वैदौरुच्यते तु विमृचिका ॥

न तां परिमिताहारा लभन्ते विदितागमाः ।

मूदाक्षामजितात्मानो लभन्तेऽशनलोलुपाः ॥

मूर्च्छातिसारौ वमयुः पिपासा शूलं भ्रमोद्वेष्टन-जृम्भनलौघाः ।

वैवर्त्यकम्पौ हृदये रुजय भवन्ति तस्यां शिरसश्च मेढः ॥

यः श्लाव-दन्तौष्ठ-नखाल्पसंज्ञौ वम्यर्हितोभ्यन्तर-जात-नेत्रः ।

आमस्वरः सर्व्वविमुक्तसन्धियांयान्नरोऽसौ पुनरागमाय ॥

(ग्रन्थतन्वीचर-तन्त्रे षट्पञ्चाशदध्यायः)

पीड्यमाना हि वाताद्या युगपत्तेन कीपिताः ।

आग्निनाग्नेन दुष्टेन तदेवाविश्य कूर्च्यते ॥

विष्टभयन्तोऽलसकं व्यावयन्तो विमृचिकाम् ।

अधरोत्तरमाग्राभ्यां सहस्रैवाजितात्मनः ॥

विविधैर्वेदनोद्गैर्वायुादि भ्रशः कोपतः ।

सूचोभिरिव गावाणि विध्यतीति विमृचिका ॥

तत्र शूलभमानाश्चकम्पस्तन्मोदयोऽनिलात् ।

पित्ताज्वरातिसारनदाहलृट्प्रलयादयः ।

अपाच्छर्द्दश्चगुह्यतावाकस्तन्मोहनादयः ॥

(बागभट्टस्य सूत्रस्थान ऽमोऽध्यायः) ।

Hirsch says : " The oft-quoted passage from the Ayurveda of Suçruta, which is adduced as evidence of the occurrence of cholera in India in the remotest antiquity, and upon which, for example, Wise relies (' Commentary on the Hindu System of Medicine ', Calcutta, 1845, p. 330) appears from the translation of Liétard (given by Scoutetten in 'Gaz. hebdom. de Méd.,' 1869, No. 29, p. 452) to furnish a picture of the disease that is, to say the least, an ambiguous one; and this objection is entirely apart from the doubt as to the very great age of the writing, at least in the form in which it now exists, and the reasonable

suspicion that its author or editor had made use of Greek writings as a model." 1

As regards the age of the writing and the indebtedness of the Hindus to the Greeks in medicine I refer the readers to my work, "The Surgical Instruments of the Hindus" where I have discussed the questions in detail. I will here simply try to prove the identity of the Visūcīkā and Cholera.

It will be seen that the cardinal symptoms of cholera or (i) cholera gravis, according to modern authorities correspond to the symptoms of Visūcīkā mentioned in Sanskrit works:

Cause: "Excess in eating, न तां परिमिताहारा लभन्ते विदितानमाः।
often of badly prepared or मूढास्त्रामजितात्मनो लभन्तेऽशनलोत्पन्नाः।
decomposing food, follow- (B)
ing periods of religious
fasts, predispose the nation
of India to Cholera."

Stitt.

Prodromal or premonitory चण्णैर्घ (S), विपाक (C)
diarrhoea.

First stage or the stage of विस्फिकामूर्च्छाधश्च प्रवृत्ताः दोषा यद्योक्त-
evacuation: रूपां विद्यात्। (C).

Vomiting: first stomach वमण्यु (B), रुद्धि (C).
contents, then rice-water.

Purging: profuse and fre- अतिसार (B)
quent.

Stool: faecal first, then rice- अतिमात्रप्रलीन मल (C)
water stool.

Cramps and stabbing pain: सूचिभिरेव यात्राणि तुदन् (S); अङ्गमह
especially of calf-muscles (C); उदरे घनः कृष्णप्रादयोः (B) :
and those of feet: abdom- खल्ली (C); इलादी गिरमोटनरूपा
inal muscles less so. वेदना (S.D.); जङ्घादीनां माटनं
खिलधरा इति लोके (D).

Thirst: unquenchable. मुखशोष (C); दृष्ट, विपासा (B) :
दृष्टा (C).

Prostration : sudden loss of strength, yawning.	कृन्धन (B, M) ; आलस्य (C).
Gastrodynia. ...	शूल (C).
Second stage : The stage of collapse : the algid stage.	तन्द्रा (C) ; संक्षमन (C).
Purging : frequent ; rice-water stool.	अतिसार (B, C).
Vomiting ...	वमद्यु (B).
Thirst : urgent ...	टष्ठा (B, C).
Nausea ..	उत्क्षेप (C, D), उपद्रितं वमनमिव (B).
Cramps ...	खल्ली (C).
Failure of strength, complete lassitude.	विस्तृक्तमग्नि (B) ; प्रमौलक (S, D)
Animal heat : Superficial temperature reduced.	कम्प (B) ; शीतज्वर (C).
Rectal temp. elevated ; sense of heat. Hyperthermic type fatal.	अन्तर्दाह ¹ (C).
Circulation : ...	दाह (M).
Heart ...	हृदयरुज (B).
Pulse : imperceptible ...	'शरासङ्कोचन (C).
Excretions :	
Urine : aneuria ...	मूत्राघात (B) ; आनाह (C).
Bile	
Voice : <i>Vox Cholericæ</i> : husky, whispering.	वाक्स्तम्भ (V) ; वाक्सङ्ग (V).
Excessive restlessness then apathy.	म्बानि (B). वाचगौरव (C) ; अङ्गशुब्दा (V).
Perspiration : profuse ; cold clammy skin.	धर्म, स्नेह ।

¹ The symptom called "antardāha" अन्तर्दाह literally means *internal burning*. In this stage the general appearance of the patient is bluish and his respiration labored.

अन्तर्दाहः शैत्यं बहिः यस्य सततं महाश्वसः ।

अङ्गमिव दग्धकल्म, सीऽन्तर्दाहार्हितः कथितः ॥

Countenance: peculiar expression; cadaveric appearance: cyanosed, drawn, pinched face.	अज्ञानवर्ण (B).
Eyes: sunk ...	अन्तःप्रविष्ट चक्षु (B).
Complexion: blue ...	वैवर्ण्य (B).
Shrivelling of the skin of extremities: washer-women's hands.	
Doughiness of the skin of the abdomen:	कुचिरागच्छते (S); आध्मान (D).
Dulness of perception ...	अल्पसंज्ञ.
Common sensibility: dull ...	भ्रम (B, C); मूर्च्छा (C).
Appetite: anorexia ...	अग्निवैषम्य (C); अरोचक (C).
Vision }	... impaired, विसंज्ञता (B).
Hearing }	
Smell	
Taste ...	अरोचक (C).
Motion ...	आलस्य (C).
Integrity of consciousness:	
The Intellect:	विसंज्ञता (B); भ्रम (B, C); मग्नता,
delusion.	प्रलाप (C); प्रलय (V)
The Will ...	मद (C)
The Emotion	
Headache ...	शिरःशूल (B); शिररीम (S.D); शिरसः भेदः (S).
Sleeplessness ...	अनिद्रा (B).
<i>The third sage or the stage of reaction:</i>	
Cholera typhoid:	
Surface warmer.	
Pulse: distinct.	
Urine: secreted.	
Temperature: febrile. ...	ज्वर (C, V).
Typhoid stage:	

Death :

Pneumonia.

Enterites.

Asthenia.

Uræmic poisoning :

Coma and convulsion. मोह, तन्त्रा (C).

(ii) Cholera Sicca ... Alasaka अलसक ।

The patient dies of collapse without showing symptoms of vomiting or diarrhoea.

"There is no, or very little, diarrhoea and vomiting, collapse sets in so rapidly that the patient is quickly overpowered as by an overwhelming dose of some poison, and dies in a few hours without purging or any attempt at reaction. At the *post-mortem* examination, the rice-water material, so characteristic of cholera, though it may have not been voided during life, is found in abundance in the bowels.

Manson : Tropical Diseases. 1900-1 pp 36-45.

Kāśyapa says¹ : "The ingested food is neither ejected by vomiting and purging, nor digested, but remains in the intestinal canal.

Just as a man who does no work is called idle, so the ingested food remains idle, and hence the disease is called Alasaka (Alasa=idle)."

Caraka says : "The poisonous undigested material, not being got rid of by vomiting and purging, suppresses the functions of the body which then resembles a stick. (It is called दण्डकालसक by V). In this stage the Alasaka is incurable. * * * As these symptoms resemble the symptoms of death caused by poisoning, the derangement is called *Āma-Viṣa* or the poison of indigestion."

नाघोयाति न चापुईमाहारो न च पश्यते ।

कोष्ठे स्थितोऽलसो भक्तस्ततोऽस्य वलः मृतः ॥

Kāśyapa.

Dyspnœa	...	{ महाश्वसः । निरुद्धो मारुताद्यापि कुचाभुपरिधावति (S).
Hiccough	...	हिक्का (S).
Belching	...	उद्गार (S).
Tympanites	...	आघ्नान, विटम्भ (C).
Cries for pain	...	अत्यर्थं कुजति (S).
Retention of urine and fæces	...	वातवर्चोनिरोधः (S).

In Visūcikā (cholera gravis) and Alasaka (cholera sicca) the following symptoms are said to be of bad prognosis :

दन्त, शोष्ठ, नख आमवर्णं (B)	...	Blueness of teeth, lips and nails. Cyanosis.
अल्पसंज्ञ	...	Slightly conscious.
चक्षुः अन्तर्गते	...	{ Eyes deeply sunk in the
अभ्यन्तरयातनेनः (M)	...	{ orbit.
वमि	...	Vomiting.
मीढ	...	Loss of consciousness.
शामस्वर (B)	...	Weak voice.
विमुक्तसन्धि (B)	...	Looseness of joints.
सन्ध (S)	...	Cessation of stools entirely is a symptom of evil omen.

पीडितं मारुतेनाग्नें श्लेष्मा रुद्धमसरा ।

अलसं चोभितं दोषे श्लेष्मातेनेव संस्थितः ।

यूलादीन् कुर्वते तीव्रास्त्वर्हातीसारवर्जितान् ॥

कुचिरान्छतेऽत्यर्थं प्रताम्यत्यर्थं कुजति ।

निरुद्धो मारुताद्यापि कुचाभुपरिधावति ॥

वातवर्चोनिरोधश्च कुचौ यस्य भ्रमन्भवतु ।

तस्यालसकमाचष्टे हिक्कोद्गारौ तु यस्य तु ॥

Suśruta Saṁhitā, VI. 56.

Caraka recommends common salt and hot water to excite vomiting in the treatment of cholera : तत्र साध्यमानं प्रदुष्टमलसी-
भूतमुन्नेष्येत्, पाययित्वा लवणमुष्णञ्च शारि ।

(iii) In the variety called विलम्बिका or दृग्दालसका we find the following symptoms described :

दृष्टत् भूतं कफमारुताभ्यां प्रवर्तते नोर्ध्वमथ यश्च ।

विलम्बिकां तां भृशदृक्शिक्षामाचक्षते शास्त्रविदः पुराणाः ॥

Suśruta Saṁhitā, VI, 56.

भृशदृक्शिक्षाः—प्रत्याख्याद्योपचरचौर्यं । इदमसाध्यचेति ज्ञेयतः । (B)

“When the ingested food is neither ejected by vomiting nor by purging due to deranged Kapha and Vāyu, the disease is called Vilambikā by the ancient physicians learned in science. It is difficult to cure.”

The Vilambikā and Alasaka, the two varieties of Visucikā of the Āyurveda show the same symptoms, i.e., collapse without vomiting and purging, the only difference being that in Alasaka there is intense griping pain but in Vilambikā pain is absent.

The Sanskrit name for Asiatic cholera is *Visūcikā* which is derived from *sūci* a needle or pin, implying that in cholera peculiarly painful sensation all through the body like the piercing pain caused by a needle or pin occurs.

सूचीभिरिव गात्राणि तुदग्मन्ति हृतेऽनिलः ।

यत्राजीर्णेन सा वैदेर्ध्विसूचीति निगद्यते ॥

Thus we find that the disease described as *Visūcikā* in the Āyurveda produces all the symptoms of cholera, and there is scarcely any doubt that cholera was known to the Hindus in ancient times. In Sanskrit books diseases are not described in detail,—only the main symptoms are mentioned. Dalvanācārya writes : तद्वद्विस्वादीर्णम् प्रायपं न भनितं तद्रूपाश्चैव अत्यक्तानाम् न सम्भवन्ति अतः प्रायपं नामिहितं । (vi. 56).

The following abbreviations are used :

C=Caraka. S=Suśruta. B=Bhāva Miśra. S. D.=Śivadāsa. V=Vāgbhāṭa. M=Mādhava Kara. D=Dalvanācārya. C.D=Cakradattā.

(iii) *Small Pox and Vaccination*.—The ancient Greeks and Romans were unacquainted with small pox (Friend, Mead, Mason Good, Adams) although William (Inquiry into the Antiquity of Small Pox), Moore (History of the Small Pox), and Baron (Life of Jenner) have tried to prove the contrary. It is generally supposed that small pox was first described by Abroon in the "Pandects" in the fifth; by Procopius in his "De Bello Persico" in the sixth and more in detail by Rhazes in his treatise "De Varioliset Morbillis." in the tenth century A.D. Greenhill's translation of Rhazes's work forms one of the volumes of the Sydenham Society's publications. But the disease was well known to the Hindus and the Chinese about 1100 B.C. There is a Chinese treatise written long before Christ, entitled 'Teontahinfa' or 'Heart Words on the Smallpox'. Holwell, in his "Account of the Manner of Inoculating for the Small Pox in the East Indies," 1767, p. 8, refers to the traditions among the Brahmans concerning the prevalence of small pox in India and to the temple-worship of Śītālā, the goddess of small pox from very ancient times.

"According to Holwell, traditions have existed in the Brahmin caste from time immemorial concerning the prevalence of small-pox in India. There has existed in that country from the earliest times the temple worship of a deity whose protection and help were invoked on the epidemic outbreak of the disease. In the Atharva Veda a description of this temple service is contained, together with the prayers used by the Brahmins at the inoculation with small-pox, which has been practised there from the remotest antiquity."¹

Dr. Chapman says that "at a very remote period, in Hindustan, a tribe of Brahmins, resorted to it as a religious

¹ J. W. Moore: XXth Century Practice of Medicine, Vol. XIII, p. 390.

ceremony. A small incision was made and cotton soaked in the virus applied to the wound. Offerings were devoted to the goddess of spots, to invoke her aid; this divinity having hinted at inoculation—the thought being much above the reach of human wisdom and foresight.”

“The temple-worship is very widely spread in India; the goddess to whom it is offered, bears various names in various parts of the country, corresponding mostly as it seems to the character of the disease or to the mode of treatment. According to Moore (*‘Med. Times and Gazette,’* 1869, Nov., p. 634) numerous temples of this kind are met with in Rajputana.”¹

There “the people firmly believe variola to be under the control of the goddess Matha, in whose honor temples abound throughout Marwar and fairs are even held at Joudpoor. Near the latter city is a space of ground filled with trees, called *Kagli Ka Bagh*’ and containing the ‘*Setla Deir*’ (or smallpox-goddess’s shrine). In the month of March a *mela* is held here in honor of Matha, and thousands of women and children attend with offerings for the goddess. The declivities of most of the numerous conical hills present either a reddened stone or a temple devoted to Matha with most probably an attendant Brahmin priest. Nearly every village has its goddess of small-pox in the immediate locality. and a large piece of ground is esteemed as holy, and ‘*Matha Ka Than.*’”²

Small-pox Inoculation in India.—“A paper was read in 1767 before the Royal College of Physicians in London by Mr. J. Z. Holwell, F.R.S.,

¹ Hirsch’s ; *Geographical and Historical Pathology* (Syd. S. Ed.) Vol. I, p. 125.

² Sir W. J. Moore : *Marwar the Land of Death.*

entitled 'An Account of the Manner of Inoculating for Small-pox in the East Indies.' This paper is extremely interesting, not only because it states the views of a physician on a practice which still prevails to some extent, though unlawfully, in India, but because the writer, as an early Governor of Bengal, was one of the founders of our great Empire in the East, and had during a residence of thirty years in the tropics actively practised his profession for eighteen of them.

"I will commence by giving a brief summary of the paper. Mr. Holwell observes that the 'the salutary method (of inoculation of small-pox) now so happily pursued in England (howsoever it has been seemingly blundered upon) has the sanction of the remotest antiquity. For five and sometimes six years together it passes in a manner unnoticed from the few that are attacked with it, for the complexion of it in these years is generally so benign as to cause very little alarm; and notwithstanding the multitudes that are every year inoculated with it in the usual season, it adds no malignity to the disease taken in the natural way, nor spreads the infection as commonly imagined in Europe. Every seventh year, with scarcely any exception, the Small-Pox rages epidemically in these provinces, during the months of March, April, and May; and sometimes until the annual returning rains, about the middle of June, put a stop to its fury. On these occasions the disease was of the most malignant confluent kind, from which few escaped that took the distemper in the natural way, and they commonly died on the first, second, or third day of the eruption, and the Europeans usually fled from the settlements before the return of the small-pox season. There was hardly ever an instance of a native of the island of St. Helena, man or woman, who if attacked when in Bengal with the disease in a natural way, escaped with

life.' This he attributed to some fundamental error of their diet.

"There was reason to believe from the institution of offerings to the goddess of small-pox that the disease had existed from very remote times in India, and had, indeed, spread from it to the West. Inoculation was performed by Brahmans from Brindaban, Allahabad, Benares, etc., over the country. They arrived in Bengal early in February or March before the usual return of the disease. The people prepared the patients for the operation by a restricted diet, and the Brahmans would not operate unless this had been done. The inoculators passed from house to house and operated at the doors asking how many pocks the parents wished, and preferred to operate, for males between the wrist and the elbow, and for females between the elbow and the shoulder. Fifteen or sixteen minute scarifications were made with an iron or steel instrument, and a rag charged with variolous matter from inoculated pustules of the previous year was allowed to remain on for about six hours. The wound was also moistened with Ganges water and the part was, in the first place, dry-rubbed for about seven or eight minutes. All the time the goddess was being invoked. Cold water was poured over the patient up to the time the fever appeared, and again after the eruption came out until the scabs of the pustules dropped off; and restricted diet was ordered for a month. The pustules were opened with a sharp-pointed thorn. The patient was exposed freely to the air outside the house, and the eruptive fever was generally so slight as not to need much restriction. The operation rarely failed, nor did any one often miscarry under it, and the number of pustules was rarely less than fifty or more than two hundred.

"Although very early prejudiced against the cool regimen and the free admission of air, Holwell soon came to the

conclusion that any one who did not adopt that treatment would lose many patients. He suggests reasons for agreeing with the Brahmans that it was wise to disallow the use of milk during the progress of the affection and he then refers to their ideas as to the causation of the disease, which were as follows. The immediate cause of the small-pox was believed to exist in the mortal part of every human and animal form. In a footnote he states that at the time of the confluent small-pox epidemics turkeys and other poultry were carried off by the disease in great numbers, and even his own parrot was found on dissection to have as many pustules in his digestive tract as on his body. The mediate cause which stirred up the first and threw it into a state of fermentation was, it was considered, the presence of innumerable imperceptible animalcules floating in the atmosphere. These, they said, cause all epidemical diseases, and imprison most malignant spirits. These particles pass in and out of the respiratory tract without doing any harm, but cling to the food and especially to milk and the other articles which the Brahmans prohibit when the diet is restricted. Holwell himself saw no reason why such pestilent animalculæ, driven by certain winds, or generated on the spot by water and air in a state of stagnation and received into the body with food, should not be the cause of the spread of malignant epidemics at particular seasons, and that epidemical blights, which may be observed to go often hand in hand with epidemical diseases, may be due to similar causes. The friction and the dilution with water seemed to promote absorption and, as Ganges water was used, confidence was given to the patient and he was impressed with the solemnity and piety of the whole transaction.

“ Holwell particularly testifies to the value of the affusion of cold water from a height up to the time of the

appearance of the fever, and again when the eruption comes out, and further says he was an eye-witness of its power and utility when the pustules had sunk. He agrees with the Brahmans in attaching great importance to opening the pustules with a thorn, as this mitigates or prevents the second fever. The opening with a thorn has also the advantage of the orifice being so small that there is no admission of air into the part. In conclusion, in laying again great stress on the cool regimen and on the free admission of air he trusted they might be introduced into regular and universal practice.”¹

*The Antiquity of Vaccination in India.*²—“Under this heading a leading article appeared in the British Medical Journal of April 15th, in which reference was made to a claim advanced by Lord Amphill on behalf of the Hindus of having practised vaccination many centuries before it was, to use his own word, ‘rediscovered by Edward Jenner. Lord Amphill based this claim on a passage in an ancient Sanscrit work by Dhanwantari which he said had been discovered by Colonel King and brought to his notice by that distinguished officer two years before. The speech in which the passage occurred was made by Lord Amphill on the occasion of the formal opening of the King Institute of Preventive Medicine at Guindy on March 11th, a report of which was published in the *Madras Weekly Mail* of March 16th.

“In commenting on that speech we ventured to hint that Lord Amphill had somewhat misunderstood the information supplied to him, as the existence in Sanskrit

¹ B. M. J., 1905, June 17, p. 1336.

² B. M. J., 1905, July 12, p. 136.

works supposed to be ancient of passages in which vaccination was described had been known for something like a century. In proof of this statement we referred to Baron's *Life of Jenner* in which mention is made of passages purporting to be extracts from a medical work attributed to Dhanwantari which were published in the *Madras Courier* of January 12th, 1819. In these passages an account was given of the inoculation of matter from the cow as a protective against small-pox. It was added that Baron had made inquiries as to the genuineness of those passages of eminent Oriental scholars, who considered that there were good grounds for suspecting that they were interpolations made with the object of inducing the Hindu to submit to vaccination by making him believe that it was a traditional practice among his people. In reference to the article, the main points of which are here recapitulated, we have received the following letter, dated May 10th, from Lieutenant-Colonel W. G. King, I.M.S., C.I.E., Sanitary Commissioner for Madras :

‘ In your issue of the 15th April, you refer to the above subject, as discussed by His Excellency Lord Ampthill in his address at the opening of the King Institute, Madras. During his tenure of office he has, as is well known, taken every opportunity of encouraging the advance of preventive medicine, and has also exhibited interest in the historical bearing of the subject in this country, in connexion with ancient Hindu writings. In response to a query on the latter aspect two years back, I furnished him with the paper to which he referred. As Lord Ampthill's statements, in this particular, were made on the authority of this document, it rests solely with me to deal with the matter.

‘ The paper in question was published in the *Madras Mail* in 1899, in response to a request for information to

me personally in its columns by the late Surgeon-General Sir Charles Gordon. It opened by referring to the oft-quoted passage from the *Madras Courier* of 1819, and stated distinctly that it had 'at intervals been circulated to the lay and medical press.' I then proceeded to say that for many years I had attempted, with the aid of Sanscrit scholars, verification of its origin from Dhanwan-tari, and, after alluding to the difficulty attending such researches, explained that 'the nearest approach' to settling the question was obtained when hunting for Sanscrit references for plague, by the quotation being found in a Sanscrit work entitled *Ayurveda Vijnana*. This is a modern compilation of extracts from various authors. As a fact, it was I who, though no Sanscrit scholar, was able to arrest attention to the passage whilst the book was being read aloud to me, as I had heard it so often quoted; and it was to this little incident Lord Amphyll had the kindness to allude. Since that period it has also been found for me in the *Sabdakalpadruma*, which is also a modern compilation, written by Rajah Sir Radakant Deb Bahadur. This author was held in the highest respect by the best Sanscrit scholars including Max Müller—a fact which should weigh in favour of the genuine character of the quotation. The work was completed, according to the author, in the thirtieth year of his age, or six years before the appearance of the *Courier* quotation. It is necessary to allude to these facts, as you have in your article erroneously assumed that I had made a claim to precedence in respect to the *Madras Courier* of 1819, in first drawing attention to the subject.

'Your main object is, however, to throw doubt upon the validity of the quotation. Unfortunately, I am not in a position to consult Baron's work, quoted as your authority; and I am placed in some difficulty by your not positively

affirming that the false 'poem' actually contained the particular verse ascribed to Dhanwantari. I shall be very much surprised if this can really be done by you. But, even if this subject be treated in the general manner you have done, I think it reasonable to believe that Baron must have misunderstood Sir John Malcolm; he must have muddled the whole subject. Far from Ellis being the criminal, he was eminently an interpolation detective. In the fourteenth volume of the *Transactions of the Asiatic Society*, there will be found exposed by Ellis, in an essay that exhibited the depth of his learning as a Sanscrit scholar as well as his careful and impartial spirit, a gross fraud by Jesuits who had, for the purpose of advancing their religion, resorted to this means. The book which he thus criticized was entitled *L'Ezour Vedam*, and was published in Paris in 1778. If this date be taken into consideration, it is clear vaccination need not have been referred to, seeing that Jenner's scientific confirmation of empirically observed facts was not made till 1798, and vaccination was not introduced into Madras by Lord Clive (Earl Powis) until 1802. Failing, therefore, your being able to prove the quotation actually formed part of the poem you ascribe to Ellis, and you are able to state where the rest of the document is to be found, there is no reason to regard him as guilty of the grave charge made against him, or that we have adduced anything to disprove the ancient character of the quotation, rightly or wrongly attributed to Dhanwantari. I, of course, do not join issue with you as to your second instance of an interpolation, as this was not propounded by me.

'As the Vaccination Department of this Presidency is a branch of my office, I have every opportunity of consulting its records, and I may state that although it is evident many thousands of pamphlets encouraging vaccination

were issued in former years, I can find no attempt to impress the people with the so-called 'poem' of Ellis and, in my opinion, such a base act would no more have secured official approval in India in the past than in the present; nor, in the Sanscrit libraries available in this Presidency, is there any trace of such a record.'

Later we received from Colonel King a further communication, dated May 25th, to the following effect :

'With reference to my letter to you dated May 10th, it is right that I should inform you that, after its despatch, I ascertained that I could not justly claim that Rajah Sir Radhakant Deb Bahadur personally admitted the disputed quotation into his *Sapthakalpadruma*, as the revised edition of this work in which it is to be found was published after his death, long subsequent to the first appearance in the *Madras Courier*. This in no way invalidates my other arguments or, indeed, greatly even in this particular, as the compilers of the revised edition are also recognized Sanscrit authorities.'

"If Colonel King will refer to our article of April 15th he will see that it was there expressly stated that we had had no opportunity of consulting his writings, and that what he calls our erroneous assumption that he had made a claim to precedence in respect to the *Madras Courier* of 1819 was founded solely on the statement attributed to Lord Ampthill that Colonel King had discovered the passage in question and had brought it to his notice. In regard to this we said that we could not help thinking that Lord Ampthill had misunderstood the information supplied to him. From Colonel King's letter it is clear that this is just what happened. On this point there is, therefore, nothing in dispute between us.

"On the general question of the interpolations our article was really in the nature of an inquiry addressed to

the learned. We confessed our incompetence on questions of Sanscrit scholarship, and we gave Baron's statements for what they were worth in the hope of eliciting some authoritative utterance on a matter of considerable literary and historical interest. It is necessary to lay some stress on this, inasmuch as Colonel King seems determined to force us into a position of antagonism to him in regard to questions on which we have expressed no opinion, for the good and sufficient reason that we hold none. His quarrel is with Baron, and bearing in mind that

'Tis dangerous when the baser nature comes
Betwixt the pass and fell incensed points
Of mighty opposites ;

we decline to be drawn into the fray. That those of our readers as may be interested in the point at issue may have a full statement of the case before them, we give the whole passage as it stands in Baron's *Life of Edward Jenner* (London 1838, vol. i, p. 555, *et seq.*). After referring to a claim of priority in the discovery of vaccination made on behalf of a Frenchman by Husson in the *Dictionnaire des Sciences Médicales* (1821), Baron proceeds :

'The same work which sets forth the claims of M. Rabaut recounts likewise the pretensions of the Hindoos to the knowledge of vaccine inoculation. An ancient Sanscrit work has been appealed to as an authority on this subject.

The subject was mentioned many years ago in the *Bibliothèque Britannique*. It has more recently, been revived in the *Dictionnaire Médicale*, and in the *Madras Courier* of the 12th of January, 1819. The writer of the last-named article refers to *Sancteya Grantham*, a medical work attributed to Dhanwantari, which is said to be 'undoubtedly an ancient composition.'

From this work extracts are given. The first extract describes the method of performing the inoculation with fluid taken from a pock on the udder of a cow, or from the arm of a human subject, etc. The next more particularly describes the small-pox produced by the fluid from the udder of a cow, and appears, in short, to be an imperfect abstract of the opinions and descriptions of Dr. Jenner. It does not at all discriminate between the different sorts of pustules to which cows are liable; it is destitute of all the characters of fidelity and accuracy which give value to information of a scientific nature, and must, therefore, have been quite insufficient to have guided anyone in the management of the very practice it professes to teach. This practice, if it did exist at all in India, must have been extremely rare, but the description given of it is not like that which would occur to any inquirer who had himself investigated the very singular properties of cow-pox inoculation. On the contrary, it wears the appearance of a delineation which had been made, not from original observation, but from materials obviously acquired from other sources and put together with studied ambiguity, the writer having been more anxious to maintain the semblance of antiquity than to convey precise knowledge on the subject of vaccination, had it ever been obtained by the Brahmins, could have been overlooked, and allowed to remain in obscurity till it was called into notice by the industry of British residents in India. To no people on the earth was the secret of vaccine inoculation of greater moment than to the inhabitants of the East, and it exceeds all powers of belief to suppose that such a secret could have been possessed by the most respected caste, without being diffused universally, and the practice adopted with corresponding avidity. The suspicions excited by the internal evidence are not a little strengthened by some circumstances

which I am about to mention. I made it my business to inquire from eminent oriental scholars whether such a Sanscrit work existed, and whether from their experience of the habits and customs of the Hindoos there was reason to believe that they possessed any knowledge of vaccine inoculation.

For valuable information on these points I have to express a deep feeling of gratitude and obligation to Sir John Malcolm, G.C.B., a gentleman not less distinguished by his genius and skill as a commander than by the wisdom, learning, energy, and benevolence evinced in all his civil relations. Through his kindness I am enabled to state the following facts:

On the introduction of vaccine inoculation into India it was found that the practice was much opposed by the natives. In order to overcome their prejudices the late Mr. Ellis, of Madras, who was well versed in Sanscrit literature, actually composed a short poem in that language on the subject of vaccination. This poem was inscribed on old paper, and said to have been found, that the impression of its antiquity might assist the effect intended to be produced on the minds of the Brahmins while tracing the preventive to their sacred cow.

The late Dr. Anderson, of Madras, adopted the very same expedient in order to deceive the Hindoos into a belief that vaccination was an ancient practice of their own. It is scarcely necessary to observe that had any authentic record of such a practice existed, these gentlemen never would have resorted to such a contrivance to gain their object. It is further to be observed that smallpox inoculation was frequently practised by the Hindoos, but there is no proof whatever that they employed vaccination.

Shortly after the introduction of vaccination into Bengal, similar attempts were made to prove that the

practice was previously known there also. As the account of this transaction is somewhat different from that which occurred at Madras, it is proper to mention it. A native physician of Bareilly put into the hands of Mr. Gillman, who was surgeon at that station, some leaves purporting to contain an extract of a Sanscrit work on medicine.

This work is said to be entitled *Sud'ha Sangreha*, written by a physician named Mahadeva, under the patronage of Raja Rajasin'ha. It contained a chapter on Masurica or chickenpocks.

Towards the close, the author appears to have introduced other topics; and immediately after directing leeches to be applied to relieve bad sores he proceeds thus: 'Taking the matter of pustules, which are naturally produced on the teats of cows, carefully preserve it, and before the breaking out of small-pox make with a fine instrument a small puncture (like that made by a gnat) in a child's limb, and introduce into the blood as much of that matter as is measured by a quarter of a ratti. Thus the wise physician renders the child secure from the eruption of the small-pox.'

This communication was shown to Mr. Colebrooke and Mr. Blaquiére, both eminent Sanscrit scholars, and they both suspected that it was an interpolation. The first-named gentleman further adds that the original work, from which the extract purports to have been taken, was not exhibited to anyone well versed in Sanscrit. I believe I may further add that Mr. Colebrooke made inquiries whilst in India, which fully satisfied him that no original work of the kind ever had existence. Sir John Malcolm has also been kind enough to ascertain that no such book is to be found in the library of the East Indian Company.

From these statements it must be apparent that the well-meant devices of those who attempted to propagate

vaccination in India, have led to the belief that the practice was known to the Hindoos in earlier times.'

"From a letter which appears in the *Madras Mail* of May 30th we gather that since the date of his last letter to us Colonel King has had an opportunity of referring to Baron's book at first hand. He adheres to his opinion that Jenner's biographer made "a complete muddle of the information received by him from Malcolm." We must frankly say that, if he did, Colonel King does not seem to us to have cleared up the muddle. Here, as far as we are concerned, the matter must rest."

We have furnished the readers with these long quotations in the hope that they may be interested in the important question as regards the origin of vaccination. There could not be any doubt as to the practice of inoculation by the Brahmans long before the advent of the English in India, Holwell's testimony supports it. But whether vaccination was ever practised in India before the discovery of Jenner was a question which could not be answered offhand. The only proof extant was the couplets in Sanskrit quoted in the *Madras Courier* in 1819, and subsequently in the *Savdakalpadruma*. The couplets are said to have been quoted from Śākṭeya Grantha of Dhanvantari. I could not trace any such work in the libraries of India, nor has the work been found in the library of the East Indian Company. No reference to it was found in the Sanskrit literature. Below I quote these couplets with translations.

It seems strange that no reference as to the practice of vaccination in India can be traced in the works of Caraka, Suśruta, Vāgbhaṭa, Mādhava, Vṛnda Mādhava, Cakradatta, Bhāva Miśra and others. But no conclusion can be drawn from this negative evidence. Neither do we find any reference to the practice of inoculation in

the works of the authors cited above. In Av., V. 22, we find a reference to the eruptive fevers: fever with spots on the surface of the body. The spotted or speckled fever—"covered with spots, like reddish sediments" undoubtedly refers to some eruptive fever, as the fever accompanying measles or small-pox. But I have not been able to trace any reference to the temple worship of the goddess of Small-Pox, "with the prayers used by the Brāhmins at the inoculation with Small-Pox," as described by Holwell. But there is no doubt that inoculation was frequently practised in India.

In the hymns to the goddess Śītalā which I have quoted below from the Kāśikhanda of the Skanda Purāṇa, it is distinctly stated that there is no medicine for this dire disease except prayers to this goddess. She is represented as having four hands, holding a broom-stick in one hand, a water-pitcher in another, a lotus in the third and the fourth hand is shown in the attitude of Abhayā mūdṛā, —the sign of fearlessness and hope. She rides on an ass, and has a winnowing fan as her head-dress. She is represented as naked. She resides in water. Śītalā really means goddess of coldness or water. Her attributes refer to the hygienic measures to be adopted when Small-Pox rages in an epidemic form. Though described as a goddess whose idol is worshipped by the mass, the patient is advised to contemplate her as thin like one of the fibres of petiole of lily, situated between his heart and navel.

The broom, fan and the water-pitcher are the appliances necessary to keep the room in which the patient is isolated, clean and free from flies. Her nakedness is meant to represent the fact that the disease is often carried to healthy individuals through the clothes of nurses, who should be as scantily dressed as possible.

The Śītalā is the Pauranic adaptation of the Vedic Āpo Devī who is also described as the mother. The

word Ap in Sanskrit is used in feminine gender, hence both Āpo Devi and Śītalā Devi are described as female deities. The Brahmans still recite in their daily-prayers the beneficial qualities of water, invoked as mother by the Sindhudvīpa Ṛṣi in the Gāyatrī metre :

“आपोहिहा मयोभुव स्नानकर्ज्जदधातनः महेरथाय चचसे ।

योवः शिवतनोरसः तस्यभाजयते हनः । कथतीरिव मातरः ।

तस्माच्चरं गमाम वो यस्य चयाय, जिन्नय आपोजनयथाचुनः ॥ ”

Water was regarded by the Vedic Indians as the source of medicine, and was used by them as a therapeutic agent of great value. It was also a means of purification.

“Water is the elixir of immortality (S.P. Br., 4, 3, 15); water being a means of soothing—they soothe by means of soothing water (*ibid*, 13). “Water is a means of purification, hence he purifies himself with water” (S.P. Br., I. 7, 4, 17). “Within the waters is ambrosia, in the waters is medicine” (S.P. Br., 1, 4, 6; Vāj. Saṁ., ix, 6).

In Rv. (x, 9, 5, 6 and 7; 137, 6) the water is described as the source of medicine; and in Av., II, 3, there is a charm against excessive discharges from the body, undertaken with spring water (see author's work “Medicine in the Atharva Veda”). In Yv. (Vāj. Saṁ., ix, 6, 1) water is also described as the source of medicine, and in xi, 38, water-goddesses are prayed for a cure. In Rv., x, 9, 1, disinfecting properties are attributed to water.

Water as a medicine is mentioned in Rv. (i, 23, 19, 20; 34, 6), Tai. Saṁ. (vi. 4, 9, 2) and Kauṣītaki Br., (xvi, 7).

The application of cold water in hyperæmia was well known. The spring water which runs down upon the mountain was used as a healing remedy; it was recommended as useful in checking discharges and

removing pain. It is also styled as the great healer of wounds. The water is said to contain a hundred remedies. Flowing water is prayed to grant a cure for heart-ache, ocular pain, and pain in the feet. The waters are called the most skilled of physicians (Av., vi, 24). "Waters are verily healers, the waters are scatterers of disease, and the waters cure all diseases" (Av., iii, 7).

But there is neither any mention of the practice of inoculation nor of vaccination in the hymn to Śītalā. So it is difficult to decide whether inoculation, not to speak of vaccination, was practised in the Vedic or Pauranic ages.

शीतलाटक-सौत्रम् ।

अस्य श्रीशीतलास्तोत्रस्य महादेव ऋषिः अनुष्टुप् छन्दः, श्रीशीतला देवता
लक्ष्मीबीजं, भवाणी शक्तिः, सर्वविस्फोटकनिष्ठस्यै जपे विनियोगः ॥

ईश्वर उवाच ।

नमामि शीतलां देवीं रासभस्यां दिगम्बरीम् ।

मार्जनीकलसोपेतां सर्पाक्षद्वृतमस्तकाम् ॥ १

वन्देऽहं शीतलां देवीं सर्वरोगभयापहाम् ।

यामासाद्य निवर्तते विस्फोटकभयं महत् ॥ २

शीतले शीतले चेति यो ब्रूयाद्वाहपोडितः ।

विस्फोटकभयं घोरं क्षिप्रं तस्य प्रणश्यति ॥ ३

यस्त्वामुदकमध्ये तु घृत्वा सम्यज्जवेत्तरः ।

विस्फोटकभयं घोरं गृहे तस्य न जायते ॥ ४

शीतले ज्वरदग्धस्य पूतिगन्धयुतस्य च ।

प्रनष्टचक्षुषः पुंसस्त्वामाहुर्जीविनौषधम् ॥ ५

शीतले तनुजान् रोगान् शृणां हरसि दुस्तरान् ।

विस्फोटकविशीर्णानां त्वमेकामृतवर्षिणी ॥ ६

मलमण्डयहा रोगा ये चान्ये दारुणा शृणाम् ।

त्वदनुष्णानमावेण शीतले यान्ति ते शयम् ॥ ७

न मन्त्रो नौषधं तस्य पापरीगस्य विद्यते ।
 त्वामिका शीतले वाची नाम्नां पश्यामि देवताम् ॥ ८
 स्याल्लतन्तुसदृशीं नामिद्वन्धसंस्थिताम् ।
 यस्यां विचिन्तयेद्देविं तस्य संत्युर्न जायते ॥ ९
 अष्टकं शीतलादेव्या यो नरः प्रपठेत् सदा ।
 विस्फोटकभयं धीरं गृहे तस्य न जायते ॥ १०
 श्रीतल्यं पठितव्यञ्च यद्वाभक्तिसमन्वितैः ।
 उपसर्गविनाशाय परं स्वस्वयनं महत् ॥ ११
 शीतले त्वं जगन्माता शीतले त्वं जगत्पिता ।
 शीतले त्वं जगद्वावी शीतलाये नमो नमः ॥ १२
 रासभो गर्दभयैव खरो वैशाखनन्दनः ।
 शीतलावाहनयैव दूर्वाकन्दनिकुलनः ॥ १३
 एतानि खरनामानि शीतलाये तु यः पठेत् ।
 तस्य गेहे शिग्रूनाञ्च शीतलावृङ्गः न जायते ॥ १४

Kāśīkhaṇḍa,

The following descriptions in Sanskrit refer to the practice of inoculation and vaccination:

“ धेनुस्तन्य मसूरी वा नराणाञ्च मसूरिका ।
 शस्त्रेणोत्कृत्य सत्पूर्यं बाहूमूले विचारयेत् ।
 तत्पूर्यं रक्तमिलितं स्फोटज्वरकरं भवेत् ॥ ”
 (धन्वन्तरौकृत शास्त्रेय ग्रन्थः १)

“ The matter of the pustules on the teats of cows or on (arms of) men should be taken by means of a knife and introduced into the arms (of child); the pus as it mixes with the blood causes the fever of small-pox.”

“ धेनुस्तन्य मसूरी वा नराणाञ्च मसूरिका ।
 तज्जलं बाहुमूलाञ्च शस्त्रेणोत्कृत्योत्पत्तिकरेण च ।
 बाहुमूले च शस्त्रेण रक्तोत्पत्तिकरेण च ।
 तज्जलं रक्तमिलितं स्फोटकज्वरसम्भवम् ॥ ”

“Take the serum from the pustules on the teats of cows or from the arms of men at the end of a knife and introduce into the blood on the arm (of the child) caused by scarification with a knife. The serum when mixed with blood (of the child) causes fever of small-pox.”—Dhanvantari's Śakteyagrantha, quoted in Savda Kalpadruma, Vol. V, p. 3311. Binodelal Sen's Āyurveda Vignāna, Vol. IV, p. 178.

(iv) *Syphilis*.—Was syphilis known to the Vedic Hindus? It is very difficult to solve this question with certainty. Nowhere do we find any description of its symptoms; and we find no distinct mention of the disease. Bloomfield, however, thinks the disease Jāyēnya to be syphilis. (Am. J. Ph., 11, 320; Hymns of Av., vii, 76, 559-561). Keśava and Sāyaṇa identify the disease as rājayakṣmā, i.e., the same as Jāyēnya in the story told at Tait. Sam., II, 3, 5, 1-3. (याज्ञ जायाम्योऽविन्दत् । स च जायासम्बन्धेन प्राप्नोति । निरन्तर जायासम्बन्धेन जायमानम् ।) From the remedial agents used in the Kauśika practice, viz., the string of a lute and the vivina plant (*andropogon muricatus*)—Bloomfield says, “I am tempted to regard the gayana as syphilis, etymologically either congenital disease (root *gan*), or venereal disease (*gāyā* ‘woman’); in that case the musical instruments may refer to the nautch girls, and the disease is cured homœopathically and symbolically by the realisation of their presence, by means of the amulets.” But the interpretation is far-fetched. Syphilis was unknown to Caraka and Suśruta; their works were composed towards the end of the Vedic age. For the first time the disease is described in the Bhāva Prakāśa, which was composed about three hundred and fifty years ago. The antiquity of syphilis is a question in which authorities differ. Hirsch says: “In the Ayur-Veda of Sūsruta there are several statements which make it at least very probable that venereal disease had

occurred in India from the very earliest times." "Friedberg gives the passage, taking them from Haesler's translation as revised by the well-known Sanskrit scholar Professor Weber. Wise's handling of the history of syphilis in India (in his "Hindu System of Medicine," p. 375) is quite untrustworthy, as Friedberg justly pronounces it to be." Haeser also supported that syphilis had existed in antiquity. There are, no doubt, undoubted references in the earlier Sanskrit works to diseases of the genitals due to lewd or impure sexual connections :

तवातिमैद्युनादतिब्रह्मव्यादा तथा ब्रह्मचारिणीं चिरोमृष्टां रजस्रलां दीर्घरोमां
कर्कशरोमां सङ्कीर्णरोमां निगूढरोमामत्यद्वारां महादारामप्रियामकामामचौत्यसलिल-
प्रचालितयोनिमचालितयोनिं योनिरोगोपमृष्टां स्वभावतो वा दृष्टयोनिं वियोगिनिं वा
नारीमत्यर्थमुपनिवमानस्य तथा करजदशनविशयकनिपातनादईनाहसामिघातास्तुषदी-
गमनादचौत्यसलिलप्रचालनादवयोङ्गनाच्छुक्रसूयवैगविधारणाग्नेद्युनानां वाऽप्रचालनादिभि-
र्ऋद्रभागस्य प्रकुपिता दीपाः क्षतेऽक्षते वा श्वयमुपजनयन्ति तमुपदंशं मित्वाचक्षते ।

स पञ्चविधस्त्रिभिर्हृदिः प्रयक्ममकैरसृजा चैकः ।

तत्र वातिके पारुष्यं त्वक्परिपुटनं सत्वमेद्रता परुषशोफताविविधाश्च वातवेदनाः ।

पैतिके ज्वरः श्वयुः पक्वोऽम्बरसङ्काशः स्त्रीवदाहः क्षिप्रपाकः पित्तवेदनाश्च ।

श्लेष्मिके श्वयुः कण्ठुमान् कठिनः स्निग्धः श्लेष्मवेदनश्च ।

रक्तजे कृष्णकोटप्रादुर्भावोऽत्यर्थमसृक्प्रवृत्तिः पित्तलिङ्गान्वत्यर्थं ज्वरदाहो शोषश्च
वाय्वश्वेव कदाचित् ।

सर्वज्ञे सर्वलिङ्गदर्शनमवदरं चैकसः कृमिप्रादुर्भावो मरणं चेति ।

Suśruta Saṁhitā, II, xii.

But it is known to every surgeon that there are many venereal sores which are not really syphilitic. It is only in the latter part of the nineteenth century that accurate knowledge of the different forms of venereal disease was made possible by advances in the science of pathology. And by modern historical methods, the long-discredited view that syphilis in the Old World was a disease of recent origin which could be traced to America has been revived.

In his great work on the venereal diseases, Astruc traces the introduction of the disease into Europe from the date of the first voyage of Columbus in 1494. The disease is said to be endemic in Hispaniola and on parts of the American continent. The native women communicated the disease to the men who attended Columbus; it was then propagated to the Neapolitans, thence to the French, and gradually to other European nations. The source of this information is the work of the historian Gonsalvo Ferdinand ab Oviedo, "Summary of the Natural and General History of the West Indies" (1525). Hunter in his classical work on venereal diseases in 1775 supported the idea that the venereal disease had existed in Europe before Columbus sailed from Palos: his authority being the author of "Discovery of America"—Peter Martyr, a friend of Columbus. Prescott in his "History of the Reign of Ferdinand and Isabella (Vol. iii, p. 50, Lond., 1838) supposes that this loathsome disease was not brought from America. Bodman reproduced a passage from the chapter records of St. Victor, 1472, in which "Mala Franzos" is referred to. But Block and Hegel have found out the date 1472 to be a forgery.

The origin of syphilis, as of leprosy, is lost in the night of time. There are special difficulties in the identification of diseases mentioned in ancient writings. The ancient medical authors did not write the descriptions of a disease according to modern pathology, but availed themselves of the knowledge prevalent at the time, and we find their descriptions defective. They were also not able to distinguish, as in the case of syphilis, the morbid phenomena peculiar to the different stages of the disease. The early Sanskrit authors described many local affections of the genitals, caused by immoral intercourse. One of these morbid conditions was called Upadamaśa. It was a

purely local disease, and it is difficult to find any reference to affections of internal organs during the course of the disease. They did not comprehend the secondary and the tertiary stages of the malady. But we must not be surprised at this. The state of medical science was in an undeveloped stage and we should not expect in their descriptions the accuracy and minuteness of detail which characterise the descriptions of diseases of the present day. The justly celebrated Hunter, who has enriched the science of medicine with great discoveries, taught that he never observed syphilitic affections of the internal organs nor of the brain, inspite of the teachings of Fallopius and Botal to the contrary. Up to the time of Ricord, the three venereal affections, syphilis, soft chancre and gonorrhœa were not clearly differentiated. There was no doubt that venereal ulcer and gonorrhœa had always been in existence. It is creditable to the ancient Indian physicians that they differentiated the local venereal ulcer (Upadamśa) from urethral discharges (Meha). Certain descriptions of and references to diseases of the sexual organs in ancient and mediæval Sanskrit books could easily be taken as indicating syphilis at the time when the authors of those books lived. But on closer examination it would be recognised that the deceptive similarity between the local conditions of the ulcers did not develop symptoms which could be referred to syphilis. There is no evidence forthcoming that any causal connexion was discovered between the local ulcer and a skin eruption of the rest of the body until Bhāva Miśra wrote in the sixteenth century. There is no description of the syphilitic syndrome in any Sanskrit work before Bhāva Prakāśa was composed and in which for the first time we find a description of the disease called Feraūga Roga or the Portuguese disease. Similar names, French Pocks by the English, Polish disease by the

Russians, Frank disease by the Turks, French disease by the Italians point to its recent introduction.

Dr. Montejo Y Robleds, a Spanish army surgeon, investigated the origin of syphilis from Spanish sources and communicated his results to the International American Congress held at Madrid in 1882: he recognised that the recent introduction of the disease was connected with America. Professor Seler in 1895 supported his conclusions; and Professor Binz arrived independently to the same view—the American origin of syphilis.

Astruc, Girtanner and Hensler in the eighteenth century endeavoured to prove the origin of syphilis in America.

Similarly the celebrated letter of Petrus Martyr in which mention is made of "*Morbus Gallicus*," dated 1489, has been shown by the recent critical investigators to be fictitious and could not have been written before 1508. Hunter's conclusions based on experiments wrongly interpreted, were founded on his notion that gonorrhœa and soft chancre were syphilitic in origin. This idea prevailed up to the time of Ricord who first clearly differentiated them. The clinical physicians in the early post-columbian period confounded the pseudo-venereal and pseudo-syphilitic diseases which resemble the syphilitic syndrome. The literature of the Old World contain no unmistakable description of syphilis prior to 1495. The results of the disinterment of bones do not furnish any proof of the existence of syphilis in the Old World in historic and prehistoric times before the same date. Not a single bone has as yet been discovered which shows undoubted signs of syphilitic degenerations, in the barrows, lake dwellings, cave dwellings, cairns and even in the burial-places of the Mediæval times.

The sudden outbreak of the disease among the soldiers of Charles VIII of France in Italy in 1494-5 attracted the attention of physicians to this loathsome disease. The

disease was unknown in Italy, and the disease in an epidemic form manifested its worst symptoms just as it does when introduced in a virgin soil. Both the Spanish authors mentioned before and the Italian chroniclers corroborate and supplement one another. The authentic reports of the contemporary Spanish authors—Diaz de Isla, Oviedo, Las Casas, Roman Pane, Hernandez and Sabagun—are in favour of the recent origin of syphilis. Columbus arrived in Barcelona in the year 1493 and syphilis spread there amongst the inhabitants. Thence it spread by the campaign of Charles VIII of France, in whose army many Spaniards served. "Syphilis had been known in España from time immemorial, where it was called Nannavatly and the Indian method of cure by means of guaiacum and other vegetable beverages, in conjunction with hydrotherapeutic, dietetic, and climatic methods of treatment" bespeak highly for their rational method of combating the disease. Dr. Bloch's conclusion—"All available statements and facts point to the last decade of the fifteenth century—particularly the years 1493-1500—as the time when syphilis first appeared in the Old World. There is not a particle of evidence to show that the disease existed in Europe before that time"—may be accepted as the last word on the controversies regarding the origin of syphilis.

The osteological discoveries of the New World which are said to prove the existence of Pre-Columbian syphilis in the bones of the American Indians are no doubt remarkable. But the pre-Columbian age of the graves has not been definitely settled and the syphilitic nature of the changes in the bone is still uncertain.

Similarly other examples may be multiplied which may prove interesting as contributions towards our knowledge of the history and treatment of diseases. But we must not dilate any further.

Now let us consider the various ways of making the study of history of medicine popular among the medical practitioners in India :

1. *Museums*.—The establishment of museums containing relics of medical science in bygone ages is one of the great and most efficacious means for promoting the study of history of medicine. Museums containing objects of historical interests are of the utmost advantage both for education of students and the advancement of science. The specimens speak for themselves and they may be inspected with ease and rapidity. People like this objective instruction which is retained with pleasure in their memories. Such a collection of historical objects in a locality can be easily appreciated by the members of the medical profession who are ignorant of the language of the country. The museums of Aldrovandus, Hunter and Parkes proved to be of inestimable value to the advancement of knowledge. The museums generally contain some objects of exceptional medical interest.

James H. Aveling¹ remarks : " Historically, a museum of instruments is most desirable. For want of a home, many of the interesting mechanical contrivances used by early surgeons are lost or destroyed. If they could be collected and preserved, we should have the means of observing the progress of surgery as exemplified by the development of the instruments employed in various operations. There seems to be little reverence for, or appreciation of, the inventive genius and mechanical triumphs of our surgical forefathers. Who would not like to see the *armamentarium* of Harvey which he left to the College of Physicians, and which was unfortunately destroyed by fire ? Who can gaze with indifference on the obstetrical instruments of the Chamberlens, now happily in possession of, and carefully preserved by, the Royal Medical and Chirurgical Society ?

¹ B. M. J. Dec. 22, 1888, p. 1416.

But, apart from sentiment, a collection of old instruments, as far as possible bearing the names of their inventors and the dates of their invention, would settle many disputes as to priority of invention, and prevent many surgeons claiming as their own contrivances which had been invented long ago.

"There are, however, other cogent practical reasons for establishing a museum of instruments besides those of historical and objective instruction. It is necessary for the purpose of protecting the reputations of surgeons and the lives of patients; public safety demands its existence. My experience enables me to support this statement. I have invented several instruments, and in the shops of instrument makers and at exhibitions I have often seen these instruments so altered as not only to be useless, but dangerous. The changes are usually made by manufacturers who, not knowing the method of using the instruments, make alterations which they suppose to be improvements. Now the result of selling an imperfect or dangerous instrument, informing the buyer that it is the invention of a special surgeon, is to seriously damage the reputation of that surgeon, for he who bought it must, if he detect its worthlessness, think badly of the person who has the credit of having invented it; and if the discovery of its faulty construction be not made, the patient may receive great injury. At present there is no remedy for this dangerous practice of altering instruments. By patenting perhaps some check might be effected, but this plan is not likely to be adopted by the members of a liberal profession. A question, however, might arise whether it could not be proved to be penal to alter the construction of an instrument in such a way as to injure the reputation of its inventor, and render its use dangerous to the patient for whose relief it might be employed.

"An authoritative collection of instruments and

appliances is the only remedy for the evils here pointed out. To this surgeons and instrument-makers might refer, and any doubt as to the proper form of an instrument might at once be satisfied. To this museum every new instrument should be sent, as every new book finds its way to the British Museum. Properly classified, the object sought might easily be found; and if a surgeon failed to send a specimen of his invention, he would have no just cause of complaint, should he meet with variations of it he does not approve.

“Every one must be pleased that Mr. Hutchinson has so ably brought this subject to the front at the College of Surgeons, and all will, I believe, re-echo his concluding words: ‘I cannot admit that the institution in which we are now assembled will have done all that it can for the perfecting of the art of surgery, until it has within its walls a collection, easily arranged for inspection and comparison, well labelled and catalogued, of all instruments and appliances, concerning the merits of which the practitioner may desire information.’”

A museum is a source of much instruction and information. The museums for pathological and materia medica specimens, both pharmacopœial and indigenous, can easily be started by the energetic action of our friends: specimens of drugs of all kinds with brief descriptions, pathological and microscopic specimens with short explanatory notes may be sent by the profession. These will be arranged and entered in a descriptive catalogue. Every facility should be given to students in their researches, as they may require to examine any specimen in the collections with more care and attention than can be done in the ordinary way of viewing the Museum. In the Medical College, Calcutta, we find that the subject of materia medica is sadly neglected. “The result is evident in every day practice.

One hardly ever meets a junior practitioner who can write a prescription free from errors. Prescription-writing is fast becoming a lost art, and is in danger of atrophy from disuse. Newfangled remedies of unknown and questionable value are being freely used by the practitioners, only because they have not that training to write prescriptions themselves. It is therefore very important to realise the cause of this in our profession. Of all the subjects *Materia Médica* forms the armamentarium of the physicians, but unfortunately the most neglected of all the subjects. There is no proper museum where the students can examine specimens. There is not a single demonstrator to coach the students in the subjects. Students can hardly be expected to master the subject from lectures alone, and the result is practitioners become means of advertising medium for patent and proprietary medicines. The remedy therefore is to have one or more demonstrators on *Materia Medica* whose duty will be to take the students by batches, familiarise them with the different specimens, teach them the art of prescription writing and above all, the most important question of incompatibility. These demonstrators can have a revision class before the examination and give the students a 'grind.' At present practical pharmacy is done by the students under the apothecary of the hospital, who has enough work of his own as an apothecary to devote much time and attention for the training of the students."¹

In the collection of economic products as displayed in the galleries of the Indian Museum, there are specimens of medicinal products, indigenous drugs, narcotics (opium, Indian hemp and tobacco) and the food substances (sugar, starch and cereals). In 1895, the Indian Indigenous Drugs

¹ I. M. R. Jan., 1922, p. 16.

Committee was founded, and the "Reporter on Economic product was appointed its Secretary. The drugs for experiment were distributed by the Medical Store Department and all the results of the clinical investigations were received in the office of the Reporter, where the meetings of the committee were held."¹ In the chemical laboratory for testing economic products in the Museum, "food products received attention, and analyses were made of numerous cereal grains, famine foods and pot herbs. Indigenous drugs were tested for their active principles and several were chemically examined for the first time. The following deserve mention: *Adhatoda Vasica*, Indian podophyllum, *kino*, *kamala*, *Waras*, Indian hemp, cinchona, Burmese storax, cutch, ipecacuanha and jalap."²

In England, John Tradescant and his son founded at Lambeth, in 1656, a general museum in which they collected all herbs in relation to medicine. Afterwards it became the basis of the Ashmolean Museum at Oxford. Soon after their time James Petiver, an apothecary to the Charterhouse, founded an important museum in London and made an extensive collection of entomological and botanical specimens. He died in 1718. All these early museums were associated with libraries. Charlton founded another museum in the Temple. Sir Hans Sloane bought the collections of Petiver and Charlton, added many more specimens and books and presented the museum to the nation, and thus formed the celebrated British Museum—a great library surrounded by illustrative collections. Fothergill was a collector of rarities and established a museum of great value. He bequeathed it to W. Hunter on the condition

¹ Indian Museum, 1814-1914, p. 66.

² *Ibid.*, p. 67.

that he will have the offer of purchase at £5,000 below the real estimate.. Hunter paid £1,200 for this museum. He enlarged this museum enormously by the addition of pathological, anatomical and natural history specimens, manuscripts, books, pictures and coins: the estimated expense amounted to £20,000. This valuable museum he made a gift to the University of Glasgow.

Of special museums—that is, collections relating to one subject only—I may mention the collection of John Dee, of mathematical and astronomical instruments and other curiosities in the reign of Queen Elizabeth; the interesting collection of Edmund King, Surgeon to St. Bartholomew's, consisting of anatomical preparations as seen by Dr. Browne, the son of the celebrated Sir Thomas Browne, in 1664; the collection of fossils in small cabinets by the geologist Woodward, the founder of the Professorship of Geology at Cambridge; the justly celebrated collection of a vast series of specimens in relation to comparative anatomy, pathology and normal anatomy, by John Hunter at the Royal College of Surgeons; and lastly, the unique museum illustrating the history of medicine—the Wellcome Museum—which will be of great help to the means of studying the history of medicine.

“The Wellcome Historical Medical Museum, founded in London by Mr. Henry S. Wellcome in 1913, is now well known to those interested in the history of medicine throughout the world.

“International in character, the collection, which is being constantly augmented, covers a wide field embracing Medicine, Surgery, Pharmacy, Chemistry and the Allied Sciences.

“The Museum is designed to represent the history from the earliest times of these branches of the Healing Art throughout the world, and their practice is illustrated by

objects, instruments and appliances of historical interest and by plastic and pictorial art.

"Medical practitioners in our Colonies and distant lands beyond the seas, especially those dwelling among primitive races, can render valuable help to the study of the history of medicine by sending native instruments or appliances used for surgical or medical purposes, or figures of deities associated with healing. Any objects of an unusual or curious nature, used in or connected with the practice of medicine, such as amulets, charms or talismans, with descriptions of their use, would be much appreciated, either as gifts or loans to the Museum." ¹

"The great interest aroused by the Historical Medical Museum during the recent meeting of the International Congress of Medicine has not abated, and we learn that the daily attendance at the Museum is still large. We recommend all doctors interested in the evolution of their art to visit it before September 30th, when it will be closed, to reopen, we believe, in the spring. Short accounts of the Museum appeared in the *Journal* of May 10th, p. 1035, and June 28th, p. 1379. Since then considerable additions have been made to the collection; but it is Mr. Wellcome's wish to make it as complete as possible. Many families have relics such as MSS., early printed books, diplomas, prescription books, autograph letters and other documents and objects associated with, or collected by, their ancestors who were engaged in medicine, surgery, pharmacy and the allied sciences. Often, on the death of those who cherish such relics, the things are relegated to the garrets, or sent to auction rooms where they are scattered amongst strangers who buy them for a trifle as curios, and so the history and record of associations with the original inventor

or user are lost for ever. We venture to suggest that it would be well if these things could be sent to take their place in the Historical Medical Museum, which has now been established in London on a permanent basis by Mr. Wellcome, where they would be preserved, and at the same time form a permanent tribute to the work and memory of those from whom they have been handed down. Many things which are insignificant and of little historical value in themselves if isolated in small private collections become important when brought into association with a series of others arranged chronologically; they often supply the missing links in the chain showing the evolution of such objects. An isolated historical object may be aptly compared to a single mosaic tessera which in itself alone signifies nothing, but when put in its place with others becomes part of a picture, and thus may help to complete a lasting record of a famous deed or a great event.”¹

A museum of the type described above is unknown to Indian physicians. It is undoubtedly true that in the Resolution of the Asiatic Society of Bengal in 1814, we find: “Resolved accordingly that the Asiatic Society determine upon forming a Museum for the reception of all articles that may tend to illustrate oriental manners and history, or to elucidate the peculiarities of art and nature in the East;” and that contributions were solicited from the public, relating to various objects among which occur “mineral and vegetable preparations peculiar to Eastern Pharmacy.” It is also true that the collection of rarities by the Asiatic Society of Bengal on the plan of a great library surrounded by illustrative collections shows the zeal and earnestness of the collectors, but this collection which is the basis of the Indian Museum contains nothing of

¹ British Medical Journal, September 13, 1913.

interest in relation to medicine. It is like the collection of Francis Calceolari in Verona in 1422 : " Whatever the earth possesses, whatever has been hidden in the depths of the sea, the taste and skill of Calceolari has collected." The Medical College collection of pathological specimens is a good one but it is mainly intended for the use of students. But there is no museum, the object of which is to stimulate the study of the great past in connection with the history of medicine, chemistry, pharmacy, and the allied sciences by a collection of historical objects illustrating the development of the art and science of healing throughout the ages. Such a collection will elucidate many controversial points in relation to the origin and use of remedial agents, in respect of the history of diseases, and in connection with the early methods employed by medicine men in different parts of the world. It is highly desirable that we should form a body to collect informations " in regard to medical lore, early traditions or references to ancient medical treatment in manuscripts, printed works, etc." Such a museum will contain exhibits which may be classified according to the methods adopted by Mr. Wellcome in his Historical Exhibition.

2. *Exhibitions.*—The exhibitions, on a small scale, had been held in Calcutta, Madras and Bombay, in connection with Medical Congress and Ayurvedic Conference. But these were of a local character though they included specimens from manufactures other than Indian. An exhibition, international in character, is highly useful for the improvement of medical arts and trade. It brings distant countries into closer connection with India and materially helps in the development of new industries and in the promotion of the commercial prosperity of India. It attracts the attention of foreigners to the great natural wealth of India and to the benefit derivable from the profitable commerce

which the country presents. It gives an impetus to manufactures suited to India. Such exhibitions will give our people opportunities and facilities of studying the possibilities and avenues of industrial regeneration. In the exhibition, not only imported articles but articles manufactured in the country should be exhibited and it would be found that goods made in India to be equal in quality to those that were imported. Surgical instruments in common use manufactured in India may compare favourably with similar articles of foreign make. The exhibits should be classified—the products of the animal, vegetable and mineral kingdoms. The edible oils, foods and food stuffs, medicinal products, drugs and chemicals should be collected: these should include the cereals, seeds including pulses or peas and nuts, vegetables, tubers, bulbs, roots and stems, fruits, starches, sugars, molasses, condiments and spices. Jams, essences, preserved fruits, pickles, confectionary, animal food stuffs (milk and its products, fish, meat, preserved and dried fish), and mineral food stuffs; salts and edible earths; narcotics and stimulants: tea, coffee, cocoa, tobacco, spirits, toddy and wine, opium; drugs comprising indigenous drugs and poisons, cinchona and its alkaloids; soaps and perfumery. There should also be collected appliances connected with sanitation and hygiene, surgical instruments—ancient and modern, splints, hospital appliances, ambulances, drainage material and other objects connected with health and physical education.

As an example let us consider the disease small-pox. We may collect evidences of primitive vaccination and inoculation among the different nations of the world. The materials illustrating the subject may be shown at the exhibition: the instruments used in the operation; methods of operation; gods and goddesses in connection with the

disease ; origin of inoculation ; its spread ; its practice ; its prohibition by law in different countries ; origin of vaccination ; its spread ; its beneficial effects ; and the importance of segregation, quarantine, etc.

Primitive Vaccination.—In the November issue of *Hygieia* in the circular of the International Hygienic Exhibition which was held in Dresden in 1912, we find that vaccination or inoculation, which is commonly regarded as a triumph of modern medical science, has long been practised by the civilized races of Asia, and even by African and other savages probably as a result of Asiatic influence. We first meet inoculation for small-pox among the Chinese. Lockhart gives the following quotation from an old Chinese manuscript, which was probably written early in the fourth century : “The ancients possessed the knowledge of inoculation of small-pox. It has come down to us from the reign of Chua-tsung of the Ling Dynasty, and was discovered by a philosopher. When the disease breaks out spontaneously it is very serious and often fatal but when it is produced by inoculation it is usually mild and does not cause more than one death in ten thousand cases.” In Persia inoculation is accomplished by scratching the forearm and rubbing into the slight wound, after bleeding has ceased, the pulverised scurf which falls from a small-pox patient. The Ashantee negroes, according to Bowditch, inoculate in seven places on the arms and legs. The Moors practise this method. The Siamese have the peculiar custom of blowing the scurf into the nose. An interesting collection of materials illustrating this subject was shown at the Dresden exhibition.¹

The different modes of infection were well known to the Hindus :

¹ Scientific American, Supplement, 1911, Jan.-June, Vol. LXXI.

प्रसङ्गात् गात्रसंस्पर्शान्नः श्वासात् सहभोजनात् ।
 एक श्वासानाद्यैव वस्त्रमाख्यातुलीपनात् ।
 कुष्ठं ज्वरश्च श्लेष्मन्नेवाभिध्यन्द एव च ।
 औपसर्गिक रोगाश्च संक्रामन्ति नरादिरम् ॥

Nidāna.

Inoculation for small-pox is still practised to some extent as a protective measure in India, for, as is well known, the mortality from the inoculated disease is much less than from the infective disease, and the form of the disease is milder in the former than in the latter case. Material from a small-pox pustule is taken, mixed with water and introduced under the skin with a lancet. The site for inoculation is the flexor surface of the forearm (Punjab) or the wrist. This practice is of great antiquity in the East. It was introduced into England from Turkey by Lady Mary Wortley Montague in 1768. During the first quarter of this century it was practised in preference to vaccination. Inoculation for small-pox in England was made illegal by Act of Parliament in 1840.¹ Inoculation was declared to be illegal in Ireland by the fourth section of the 'Vaccination Amendment (Ireland) Act of 1868 (31 and 32 Vict., Cap. 87)'

James Moore in his "History of Small Pox, London, 1802," traces the first appearance of the disease in China, on the authority of a Chinese treatise written long before Christ and entitled "Teontahinfa" ("Heart Words on the Small Pox") to the time of the Tschu dynasty, or the period between 1122 and 249 B.C. "In a short article on "Small Pox in China" Mr. F. Porter Smith tells us that the disease dates from the reign of the first emperor

¹ Footnote to the Report of the Leprosy Commission in India (1890-91.), p. 10,

of the (Eastern) Hun dynasty, Kwang Wu, who reigned A. D. 25-28. Certain it is that inoculation has been practised among the Chinese for a thousand years or more."¹

Inoculation has been practised amongst the Chinese from dim antiquity and its origin is lost in mythical genesis. At the present day, as from early times, three methods of the artificial production of small-pox are practised : (a) the scab from a dried small-pox pustule after being pulverised, is blown up the nostril ; (b) the clothes of a person suffering from small-pox are worn by the person to be infected ; (c) the matter from a small-pox pustule is inserted beneath or on the abraded skin."²

The operation had been practised from time immemorial in China and also in Persia. The Chinese plan of giving small-pox to persons in health consisted in inserting into the nostrils tents of charpie covered with dried crust of the variolous eruption. They called the procedure 'sowing the small-pox.' From China and Persia inoculation or 'engrafting' was introduced into Georgia, Circasia, Turkey and Greece. In 1717 a very clever English woman, by name Lady Mary Wortley Montague, wife of the British Ambassador at the Ottoman Court, wrote home glowing accounts of the marvellous results of inoculation as practised at Adrianople, among other persons upon her own son, a boy six years of age. Her influence led to the open adoption of the procedure in England in April, 1721, and two years later, in 1723, Dr. Bryan Robinson, sometime President of the King and Queen College of Physicians, first performed the operation in Ireland. Many years elapsed before it obtained a footing in France, where at first it had been rigorously prohibited

XXth Century Practice of Medicine, Vol. XIII, p. 391.

B. M. J., 1899, Vol. II, p. 761.

by law; but in 1756 the children of the Duke of Orleans were inoculated, and in 1758 the practice was introduced into most of the large towns."¹

In the letter referred to above she writes: "Every year thousands undergo this operation (*i.e.*, inoculation) and the French Ambassador says pleasantly that they take the small-pox here by way of diversion, as they take water in other countries. There is no example of any one that has died in it and you may believe, I am very well satisfied of the safety of the experiment, since I intend to try it on my dear little son."²

All exhibitions have an educational value, especially in a country where the mass of the population is illiterate and the women live a secluded life. I quote an extract from the speech delivered at the opening of Convocation by the Hon'ble H. J. Reynolds, Vice-Chancellor of the Calcutta University:—"I speak of the Exhibition to-day," Mr. Reynolds said, "as an educational agency, and as such it cannot but have made an impression even on the most simple rustic, who regarded it with a kind of stolid wonder,—as a mere *jádughur*, a mere palace of magic. The Exhibition is a school which has brought something even to such unpromising pupils as these, and still more it has aroused the interest and quickened the intelligence of the Indian craftsman and citizen. Next, it has been a mighty power in breaking down those traditional habits which in this country seclude the female sex from association with men. No one can have visited the Exhibition without being struck with the number of native ladies who were to be met with in its courts and galleries. Arrangements were made for setting aside certain days and hours for their visits, but this scheme was only partially successful.

¹ XXth Century Practice of Medicine, Vol. XIII, p. 462.

² The Letters and Works of Lady Mary Montague.

They found that they could enter among the general throng of visitors without being in any way molested or annoyed, and they availed themselves freely of this newly-discovered liberty. I saw it stated not long ago in the papers that nearly 50,000 native ladies had thus visited the Exhibition ; and if this statement is correct, the fact is one of which it would be difficult to exaggerate the importance."

Nothing could be simpler or more effective for the purpose of instruction than such exhibitions. The exhibits dealing with historical matters have great value. They may be devised either to treat of general history of medical science or of historical matters of special local importance. Such an exhibit might be designed either to be complete in itself or to form part of a central exhibition. An exhibit may be permanently centred in a town, where people from various parts of the country resort, or so arranged as to be circulated among cities of more or less importance. Demonstration should be given in conjunction with exhibits. Representations of Āyurvedic dispensaries, and indigenous drug shops in which are collected the various kinds of herbs used for medical purpose, pharmaceutical apparatus and surgical instruments, gods and goddesses of medicine in Indian mythology, method of teaching the students, relation of physician and his patients, charms and talismans fastened round the patients' body in order to protect him from evil spirits, temple sleep as practised in famous temples, religious offerings to gods by the Brahmins for cure of the incurable diseases, etc., may form a most interesting exhibition.

A Health Conference and Exhibition may be held in a manner to appeal to all classes. The simple practical methods of sanitation which are attainable to even the humblest villagers, the practical measures that may be undertaken for child-welfare work for the saving of

infants' lives, and the laws of school hygiene to maintain standards of efficient citizenship may be demonstrated and will be highly appreciated by all classes of people. The working programme which follows I have quoted from Mr. Wellcome's classification of Exhibits in the Historical Medical Museum :

CLASSIFICATION OF EXHIBITS

Section 1.—Medicine.

(a) Animal medicine ; *materia medica* of the animal creation : traditions concerning the connection of animals with the healing art.

(b) Medical deities of savage, barbaric and other primitive peoples ; figures, fetishes, charms, implements and other objects associated with the art of healing.

(c) Antient deities of healing and other subjects associated with the art of healing by early primitive peoples and the early civilisations.

(d) Votive offerings for health (*Donaria*), amulets, amuletic medicines, gems, emblems, talismans, rings, charms and other objects connected with the art of healing.

(e) Paintings, drawings, engravings, etchings, photographs, models, bas-reliefs, sculptures and casts of medical interest.

(f) Pictures and miniatures from MSS. of all ages, of medical, surgical, pharmaceutical and alchemical interest.

(g) Portraits in oil, water-colour or wax, miniatures, silhouettes, etchings and engravings. Sculptured figures or busts of physicians, surgeons, alchemists, botanists, apothecaries, chemists, pharmacists, nurses, etc., of all periods.

(h) Pictures of medical, chemical and pharmaceutical institutions of all nations.

(i) Pictures representing the important epochs and interesting events, such as original operations, discoveries, etc.,

in the history of medicine, surgery, chemistry and pharmacy.

(j) Medals, medallions, plaquettes and coins of historical medical interest.

(k) Rare and curious MSS., xylographs, incunabula, early printed books and works of especial historic interest, periodicals, pamphlets, book-plates, etc., of, and connected with, medicine, surgery, pharmacy, chemistry, botany and the allied arts.

(l) Historic letters, prescriptions, autographs, case and note-books, records of experiments, ancient diplomas, licences, corporate insignia, and personal relics of medical, pharmaceutical and chemical interest.

(m) Relics of the influence of astrology on medicine, horoscopes, and other astrological diagrams bearing on the art of healing.

Section 2.—Surgery, Dental Surgery, Veterinary Surgery and Anæsthetics.

(a) Instruments used in surgery by prehistoric and savage peoples.

(b) History and development of instruments and appliances used in surgery from the earliest times.

(c) Curious surgical appliances used in antient times; barber-surgeon's bleeding basins and bowls, cupping instruments, etc.

(d) Improvised instruments and appliances that have been used in emergencies, especially those that have led to inventions and discoveries.

(e) Calculi, and other curious specimens of historical interest.

(f) Relics of ancient dentistry; early artificial dentures.

(g) Ancient dental instruments and appliances.

(h) Ancient instruments used in veterinary surgery.

(i) Historical apparatus connected with the discovery and use of anæsthetics.

Section 3.—Anatomy, Pathology, Obstetrics, etc.

(a) Curiosities of anatomy, and curious anatomical models in wax, ivory, etc.

(b) History of the nomenclature, causation and treatment of the most important diseases that have afflicted mankind from the earliest times.

(c) Obstetric chairs, and other appliances used in early midwifery practice, the lying-in-room in ancient times, models for obstetrical teaching.

(d) Manacles and other appliances used in the treatment of the insane in ancient times.

Section 4.—Ophthalmic and Philosophical Instruments, etc.

(a) Ancient spectacles, eye-glasses and instruments used as an aid to sight.

(b) Ancient instruments and appliances used for testing sight.

(c) The microscope from the earliest period.

(d) Historic microscope.

Section 5.—Hygiene, Public Health and Preventive Medicine.

(a) Objects of interest, ancient and modern, connected with public health, preventive and tropical medicine.

(b) Masks, and other preventive methods of protection used against plague in ancient times.

(c) Exhibits illustrative of physiology, anthropology, microscopy, bacteriology, biology, parasitology and geography.

(d) Placards, posters, manifestos, declarations concerning health and disease, etc.

(e) Ancient bills of health.

Section 6.—Pharmacy.

- (a) Ancient pharmacies.
- (b) *Materia medica* of all ages, specimens of ancient medicines and remedial agents of various periods.
- (c) Specimens illustrating the use of animal substances in medicine.
- (d) Early and curious relics of pharmacy.
- (e) Ancient stills, alembics, mortars and pharmaceutical apparatus.
- (f) Specimens illustrating the history of early pharmaceutical preparations.
- (g) Curious bottles, carboys, ointment and specie jars, drug vases, pots, ewers, mills, containers, and implements and appliances used in pharmacy.
- (h) Scales, weights and measures of all ages.
- (i) Ancient prescriptions and curious pharmaceutical recipes and recipe books.
- (j) Ancient prescription books and price lists.
- (k) Ancient counter bills, labels, business cards, curious advertisements and trade tokens.
- (l) Old travellers' note-books and curious orders.
- (m) Ancient apothecaries' shop signs and early fittings, early pharmaceutical preparations and specimens of obsolete and curious medical combinations.
- (n) Ancient and modern medicine chests, civil, military and naval.

Section 7.—Chemistry and Botany.

- (a) Alchemists' laboratories.
- (b) Ancient still, and apparatus used by early alchemists.

- (c) Historical apparatus used by famous discoverers.
- (d) Products and preparations, ancient and modern, of chemical and scientific research.
- (e) First specimens of rare alkaloids, and other preparations made by their discoverers.
- (f) Rare elements and their salts, etc.
- (g) Curious astrological, magnetic and early electrical appliances.
- (h) Ancient herbaria.
- (i) Specimens of abnormal plant forms and curious roots used in medicine.
- (j) Relics of famous botanists.

Section 8.—Hospitals, Nursing, Ambulance, Dietetics and Alimentation.

- (a) Objects connected with early hospitals and general nursing.
- (b) Early appliances used in nursing the sick.
- (c) Ancient bed-bottles, urinals and bed-pans.
- (d) Naval and military nursing, ambulance appliances and equipments.
- (e) Relics and objects of interest associated with nurses.
- (f) Relics of foundling hospitals.
- (g) Ancient methods of grinding corn, baking and cooking.
- (h) Curious articles of food and culinary implements.
- (i) Methods of infant and invalid feeding in all ages. Historic menu-cards.

Section 9.—Toxicology and Criminology.

- (a) Specimens of rare and curious poisons.
- (b) Historical objects connected with famous poisoning and other criminal cases.
- (c) Curious methods of torture and execution.
- (d) Improvised instruments used for criminal purposes.

Section 10.—Quackery.

- (a) Ancient and modern pictures, prints and relics of notorious quack doctors.
- (b) Ancient and modern specimens of quack medicines, preparations and appliances.
- (c) Old bills, placards and pamphlets referring to quack medicines.

Section 11.—Adulteration of Foods and Drugs.

- (a) Specimens showing the adulteration and falsification of drugs, medicines, foods, fabrics and other articles affecting health, or associated with medicine, pharmacy and allied sciences.

Section 12.—Photography.

- (a) Objects illustrating the invention and history of photography.
- (b) Early cameras and apparatus.
- (c) Daguerrotypes.
- (d) Portraits of the pioneers of photography.

(e) Original papers and MSS. connected with photography.

(f) Application of photography to medicine and surgery, X-ray photography.

(g) Early and rare apparatus.

(h) Curiosities of photography and its latest developments.

3. *A scientific library for India.*—At present we have no good modern scientific library in India. A good library is, however, indispensable to the disciples of Esculapius. The votary of science needs his library as well as his laboratory for the advancement of his department of research.

“During the past dozen years from time to time complaint has been heard of the need of a library of scientific books and periodicals for India. At present we cannot be said to have any such thing as a good modern scientific library in India. What indeed have we in the way of medical libraries? We only know of the useful collection of books in the office of the Director-General in Simla. This consists of a large number of old volumes, of many bound sets of medical periodicals, and a good collection of modern books on the various branches of medical science, but these cannot be of use to the worker in India, they are necessary as works of reference for the Director-General himself. Doubtless the Pasteur Institute has by now a fair collection of modern periodicals and books on bacteriology. In Calcutta there is a Medical College Library for the use of the staff and the students, good as far as it goes, and there is a fair collection of old and new books in the office of the Inspector-General of Civil Hospitals, which books are available for use of Civil Surgeons in Bengal.

“The Asiatic Society of Bengal has a fine collection of scientific books and especially periodicals, but the

proportion of medical periodicals is very small and naturally so, as this great Society, though largely supported by medical officers, is in no sense a medical or even only a scientific society.

"We have no exact information as to the resources of Madras and Bombay or Lahore, no doubt all the Medical Colleges have useful libraries for the use of their staff and students.

"Something more than this is badly needed in India. A Central Medical Library containing all books of reference, periodicals relating to the medical sciences is what we need. Such a library should be centrally situated, it should consist of two parts, a library of reference and a circulating library. It should be in charge of a paid librarian, who should know sufficient of French and German to hunt out references, and if need be translate passages for workers requiring references.

"The circulating library should possess several copies of all the best modern books on medicine, surgery and allied sciences, these should be available for medical officers all over India. An annual fee should be charged for the use of the library of small amount, and a deposit should be exacted against the value of books lent. There should be strict rules for the return and proper packing of books lent, and a limited period put as to the number of days or weeks a book lent out should be kept by the reader.

"A nucleus of such a library would be obtained by the transfer of many books from some of the small libraries above-mentioned.

"Let us glance for a moment at the establishment of the library at Manila. This library commenced with a nucleus of only fifty books in July, 1902; by May 1905 it contained 17,350 volumes. This consists of 250 periodicals in all branches of science, of the latest editions of scientific

books published in Europe and America, copies of reports, etc. At first the library was to be for reference only, but owing to a growing demand at the beginning of 1904, arrangements were completed by which all persons employed in the various departments of Government might take out 'borrowers' cards' subject to the provision of certain rules. A catalogue has just been published by Miss Mary Polk, the Librarian, and the library is now in a position of great usefulness, and the worker in Manila no longer feels the isolation and want of books of references which so greatly hinders the worker in the tropics."¹

An increase of books in the library should be constantly kept in view, and an attempt should be made to procure as perfect and extensive a series as possible of the transactions and proceedings of all the learned medical societies which now exist or have existed in different parts of the world. The catalogue of serial publications of learned societies, state governments, universities, public and private libraries should be collected. Letters should be sent to all the societies with a request that deficient series of volumes or parts of volume be supplied and books which are not to be found in the Catalogue of the Library be furnished from duplicates at the disposal of the different libraries of the world.

The medical periodicals save us a vast expense which would otherwise be incurred for procuring many expensive works. In these periodicals we may read the lectures and opinions of the celebrated medical men of the civilised countries, and thus come into close contact with an influence of the great pioneers of science;—the personal magnitude of a great mind acts as an incentive to future discovery.

¹ I. M. G., October 1905, p. 387.

The library should contain the best systematic monographic and elementary works in different languages. It should keep alive the interest of the average readers in books. In selecting books for purchase, preference should be given to monographs and periodicals which have reference to tropical climate. Always remember the remarks of Lord Avebury: "It is one thing to own a library; it is quite another to use it wisely." The library should have a fair collection of Old English and Oriental medical literature whether in European or Oriental languages. The librarian should not only be a book-lover but an erudite and discriminating student of medicine, ever ready to help the authors of any recent contributions on their subjects with necessary materials which may be of good service. All photographs, negatives, maps, charts, and drawings should form part of the library. The members should testify their liberality and taste by voluntary contributions to the library, in the shape of rare and important monographs and volumes of standard medical works of reference. The Stillé Library of the University of Pennsylvania is a monument to his love of the literature and history of the science of medicine. Such a library would be a great boon to the medical profession not only of Calcutta, but of more wide areas and will be the means of bringing all sections together in friendly union. Interesting collections of books may be purchased—especially of erudite medical scholars. In Europe such collections often secure good prices. As an instance I quote here remarks on the sale of a famous collection of a medical antiquarian.¹

"During the week Messrs. Knight, Frank, and Rutley have held an interesting sale, at their Auction Galleries in Conduit Street, of books, engraved portraits, manuscripts,

¹ B. M. J., Aug. 26, 1906, p. 449.

engravings, and antiquities, formerly the property of Thos. J. Pettigrew, F.R.S., F.S.A. (1791-1865). The sale was by order of the executors of a descendant, in whose possession the collection had remained since the death of the well-known surgeon and antiquarian in 1865. The fact that forty years had passed added interest to a collection which represented the life-work of a man who played no small part in advancing medical and antiquarian knowledge in the earlier part of the last century. In spite of the holiday season the sale attracted a large attendance, and good prices were obtained. The catalogue contained 260 lots, of which nearly half were books, pamphlets, and manuscripts. The first five lots were the earlier volumes of the *Journal* of the British Archaeological Association, in which Pettigrew took a leading part from its foundation in 1843. He acted as its treasurer, and some of the earlier meetings were held at his house. There were several works illustrated by George Cruikshank, in their original paper covers, and bearing the autograph and inscription of the artist to his contemporary and friend, Pettigrew, for whose work on the *History of Egyptian Mummies*, published in 1834, Cruikshank drew the coloured plates. Of this work an important remainder was sold. The original drawings for the coloured plates were included amongst the drawings and engravings. The most important item amongst the books was Lot 76, *Gulielmi Harvei Exercitatio anatomica de motu cordis et sanguinis in animalibus*, Francofurti, 1628, first edition. This small and brief pamphlet, not exceeding in length an average medical lecture or address, realized £30. The catalogue included remainders of some of the well-known works with which the name of Pettigrew is associated, such as the *Bibliotheca Susseriana*, of which the first volume appeared in 1827 and the second in 1839; Pettigrew's *Medical*

Portrait Gallery : Lucien Greville with George Cruikshank's etched illustrations, 1833. The collection of engraved portraits of physicians, surgeons, and medical writers, chiefly of the latter part of the eighteenth and the beginning of the nineteenth centuries, realized upwards of £50. It included three portraits of Edward Jenner: an impression of the three-quarter length, of the doctor leaning against a tree, drawn and engraved by J. Smith, was sold for £5 15s.; and two others, one by W. Sharp and W. Skelton, after Hobday, in proof state, and the other by W. Say after Northcote, realized £7. There were several portraits which recalled Pettigrew's connexion with the Medical Society of London and the Royal Humane Society, notably those of Lettsom and the Duke of Kent, of which the original copper-plates, engraved by Skelton, were sold. It was through the influence of Lettsom that Pettigrew became Secretary to the Royal Humane Society, and it was there that he made the acquaintance of the Duke of Kent, who appointed him surgeon extraordinary, and subsequently surgeon in ordinary to himself and the Duchess of Kent. In that capacity he vaccinated their daughter, the late Queen; the lymph was obtained from one of the grandchildren of Lettsom. The Duke of Kent brought Pettigrew under the notice of the Duke of Sussex, and the latter made him surgeon in ordinary and also librarian to Kensington Palace, so that indirectly the influence of Lettsom led to the compilation of the *Bibliotheca Sussexiana*. Amongst the miscellaneous engravings, Lot 177—a set of four relating to the *Victory*—realized £7 10s., and were of interest as recalling the fact that Pettigrew's father was a naval surgeon and served in the *Victory*."

The librarian should always bear in mind, that the call to-day was for a greatly improved library service, and

that one of his functions was to direct the public taste for books, so that the people might learn to distinguish what was good, original and sound from what was futile and useless. The main purpose of a library was to meet the intellectual needs of the students after they had done with their purely academic studies. But he should on no account throw away books which seems to him useless. Dr. Arthur Ernest Cowley, Librarian of the Bodleian Library, Oxford, one of the chief speakers at the Conference of the Library Association which concluded at Cardiff recently, said that at the Bodleian Library they got rid of nothing. Whatever they received was deposited there for all time, and it would be dangerous, even if they had the power, to discard or to refuse to receive anything. "For instance," he said, "when the First Folio of Shakespeare was sent to us in 1623 we received the copy in sheets and bound it. In 1664 we had a newer edition. This was therefore thought a better edition, and so the first folio was sold probably for a very few shillings. All trace of it was lost for 240 years, until in 1905 it unexpectedly emerged from a country-house library and was identified with complete certainty. It was then bought back by the Library for £3,000."

The teachers should encourage their students to undertake research in the public libraries. It is desirable that the librarian should be a member of our profession, otherwise it would be difficult for him to help scholars to learn anything from the history of medicine in any of its branches. The Libraries of the Calcutta Medical College and Carmichael Medical College, I am sorry to remark, have not been, but should be placed, in charge of scholars who have been well-informed physicians.

4. *Lectures*.—Popular lectures on subjects of historical interest may be arranged for illucidation of historical

truths. A series of lectures may be delivered as regards the history of medicine in various countries as medicine men existed in all countries: the medicine in India, Egypt, Babylon, Assyria, Greece, Rome, Arab, China, Japan, etc. The relation of priest and physician offered interesting studies. The medical ethics—its rise and progress—and its present position among professional men may be dilated upon in a series of lectures. As regards the history of medicine in Britain, the Fitz-Patrick Lectures are replete with information on medical study in London during the Middle Ages, English medicine in the Anglo-Saxon times, the Arabian medicine, and other interesting subjects. The Harveian Orations deal with important historical studies: the relation of Harvey to his great predecessor Galen; appreciation of the works done by his companions and contemporaries; commemoration of the good deeds and the munificence of the founder, benefactors and donors of the Royal College of Physicians. Lectures on the history of medicine may deal with the general study of its philosophy, the exposition of various theories which have been used in by-gone ages, the lives and works of ancient physicians, and the epidemics of past ages: these informations cannot but be instructive and useful to us.

5. *Pictures and Drawings.*—The aid of pictorial representation in studying history of medicine may here be best shortly adverted to. A collection of portraits, etc., are essentially necessary for a systematic study of the subject. Who does not like to see the features of eminent surgeons and physicians—the real benefactors of human race! So we should preserve the likeness of such men. Pictures of ancient hospitals, pharmacies, dispensaries, surgical operations, surgical instruments and appliances, and ambulance equipments should be collected from

different countries of all ages and scientifically studied with reference to evolution of medical knowledge. It has been said: "A few scratches with a pen are better than whole pages of the most elaborate description"—*Mrs. Jameson, Legend of the Madonna.*

"Segnius irritant animos demissa per aurem
Quam quæ sunt oculis subject fidelibus."

Hor. Epist. ad Pisones, l. 180.

"Things by the ear received, men's minds excite
Much less than when submitted to the sight;
For the spectator with his trusty eyes,
To his own mind impression best applies."

Translation by Andrew Wood, M.D.

The importance of illustrations in books of medical science is apparent to the students of medicine. The pictorial representations of "Domestic Sanitary Defects"—a book by T. Aridgin Teale, M.A., Surgeon to the General Infirmary, Leeds, shows at a glance every important fault to which domestic sanitary arrangements are liable. The disastrous effects of small pox, the benefits of vaccination, the good effects of pure air and water, ventilation of dwelling houses, school buildings, barracks, etc., may be better shown by wall diagram, pictures, and magic-lantern slides than by written descriptions. To help students in their study of history of medicine various devices may be improvised. As an example, let me mention the *Historischer-Medicinal Kalendar*:

A MEDICAL ALMANACK: "This almanack is printed in 183 sheets, to be torn off every other day as the year advances. Professors PAGEL and SCHWALBE have clearly

devoted much care to their *Historischer-Medicinal Kalendar*.¹ Each sheet, about 9 inches in length and over 3 inches in breadth, bears at the foot the dates of two consecutive days, with the usual astronomical and ecclesiastical notes. The middle of the page is devoted to short notices of the medical worthies of every age who began or ended their careers on the corresponding days, British authorities being duly honoured. The text also includes notes on medico-historical events, quotations from standard authors on medicine and doctors, and pieces of folk-lore. The essential feature of this almanack is an illustration at the head of the page. Several collections have been laid under contribution; the reproductions of the Dutch school of the seventeenth century are exceedingly good, so are the copies of yet older woodcuts from medical works of the Paré type. There remains a considerable proportion of facsimiles of medals commemorating the cholera at Hamburgh, the visit of Napoleon III and Eugénie to a cholera ward, the Red Cross Union and others less pleasing, and of the character rated by second-hand book-sellers as "curios." The elaborate medal representing literally the figurative purgation of Louis XIV by the Pope and the Bey of Tunis would seem to show how that monarch was hated outside his own kingdom, until we find a similar work of art bearing the figures of Louis, Marlborough, and Eugene under the influence of a drastic judge, an unsavoury metaphor expressing the relief felt by all concerned when the Peace of Utrecht was signed."

The portraits of some of the professors of the Calcutta Medical College have been collected in the college; but the

¹ Spemann's *Historischer-Medicinal Kalendar*, 1905. [Spemann's Historico-Medical Almanack for 1905.] Bearbeitet von Professor Dr. J. Pagel und Professor Dr. J. Schwalbe in Berlin. Berlin and Stuttgart; W. Spemann. (M. 2.)

portraits of ex-students of the college who have made their names famous in their country are to be found nowhere. The lives of the alumni of the college should be narrated in a Roll of the College with their portraits. The Annual Medical list as published under the direction of the Bengal Council of Medical Registration pursuant to sub-section (1) of section 32 of the Bengal Medical Act, 1914, supplies us with the qualifications of the physicians and surgeons, but it gives us no information as regards the work done by them in the domain of special subjects followed by them.

It is unnecessary to dilate this Introduction any further. I conclude it with the remarks¹ of Adams: "Surely every age ought to endeavour to benefit by the experiments, whether successful or otherwise, of all preceding ones; instead of every generation commencing a new series of trial, and wandering over the same ground in search of truths which had been long ago discovered; or in stumbling through the mazes of error without regarding the beacons set up by their forefathers to direct the footsteps of their descendants. If the wisdom of antiquity be entitled to high reverence in any case, it surely is so in medicine, founded as this art especially is on general observation and experience."

¹ *Paulus Aegineta*, Vol. I, Sydenham Society's Publications, p. vii.

APPENDIX I

PROGRESS IN INDIGENOUS MANUFACTURE.

Medicines Available in Large Quantities.

"A noticeable feature in Calcutta in recent years has been the remarkable progress made in the manufacture of drugs and pharmaceutical preparations out of indigenous materials. Thus it is now found that many of the dispensaries large and small, private and State, are largely using locally-procured medicines and drugs in preference to those imported from other countries. This change is due to the strong advocacy, by well-known medical men, Indian and European, for the development of this branch of local industry and the whole-hearted co-operation by the Government in this direction. Prominent members of the Indian Medical Service and well-known scholars of scientific research pointed out to the Government and the people the necessity for this industry from financial and other considerations.

Among Indians, those who were advocates of a more extended substitution of locally-procured drugs held that the advantage might not be so much in the financial saving to the country as in the more extended use of serviceable drugs. No one who had looked into the question of the remedial agents sold in the village drug-shops could doubt that many, in fact the majority, were worse than useless. The few that were good were neglected and largely so because of the cry for imported drugs and it was a frequent complaint that European pharmacy was

obliterating all knowledge of the time-honoured drugs of this country. There was an awakened interest in the subject of India's indigenous drugs and monumental works by an army of European savants replete with particulars regarding the drugs of India gave the results both of personal investigation and of a laborious enquiry into recognised sources in the contemporary medical world. With the establishment in India of Universities and medical schools where European medical science was taught there soon arose an army of pupils, not unworthy of their masters. And their labours in the field of pharmacology coupled with the sympathy of well-known members of the Indian Medical Service gave an impetus to the investigation the possibilities of indigenous medical drugs.

In 1918 the Board of Scientific Advice accepted a proposal for the formation of a Drugs Manufacture Committee to investigate the possibilities of the cultivation of medicinal plants in India and the manufacture of drugs from them on a commercial scale. The Government of India acted on this recommendation and appointed a committee whose primary functions will be to investigate. The possibilities of the cultivation of medicinal plants in India and (2) the manufacture of drugs from them on a commercial scale. And it was also proposed that the committee should consider the various lines on which the investigation can best be undertaken and also the present position as regards the manufacture of drugs in India from indigenous products and the Indian requirements of such drugs as have hitherto been imported from abroad. As soon as experience has proved that any drug can be manufactured at Government Medical Store Depôts at a sufficiently low cost, private enterprise will be invited to undertake its manufacture. It is learnt that considerable progress has now been made and that several articles

which before the war were imported, are now being manufactured in India.

Although much yet remains to be done before the resources of India can be fully utilised in the production of drugs, the following list of articles which are wholly or in part derived from Indian sources shows that some appreciable progress has been made. These articles are ; Absolute Alcohol, Acids—Hydrochloric, Nitric and Sulphuric—Alum, Ammonia, Argenti Nitras, Caffeine, Calcium Carbonate, Calcium Chloride, Calcium Phosphate, Castor Oil, Collodion, French Chalk, Glucose, Kerasine Solution, Lysol, Magnesium Carbonate, Magnesium Sulphate, Morphia, Oleic Acid, Oils of Linseed, Dill, Cloves, Carraway, Cedarwood, Croton, Sandalwood, Theobroma, Eucalyptus and Turpentine ; Pharmaceutical preparations of Aloes, Asafœtida, Belladonna, Benzoin, Cinchona, Colocynth, Digitalis, Hyoscyamus, Indian Hemp, Liquorice, Nux Vomica, Opium and Squills ; Plaster of Paris, Potassium Carbonate, Prepared Chalk, Pyroxylin, Rectified Spirit, Soft Soap, Sodium Arsenite, Sodium Carbonate, Sodium Chloride (chemically pure), Sodium Nitrate, Sodium Phosphate, Sodium Sulphate, Starch, Sulphate of Iron, Tale, Tannic Acid and Thymol.

Many of the above have been manufactured in India for the first time and are now available for sale in large quantities."—*The Englishman*, October 11, 1922.

History of Indian Medicine

CHAPTER I

BRAHMĀ

The Hindus believe the science of medicine to be of divine origin. In the R̥gveda,¹ we find a verse addressed to god Rudra: "I hear thou art the best of physicians." He is also described as "the depositary of all sciences," and "the possessor of healing medicines." In the Yajurveda, he is referred to as "the first divine physician"² "who drives away all diseases." In the Atharvaveda, we find: "(The god) that has caused (disease) shall perform the cure. He is himself the best physician. Let him indeed, the holy one, prepare remedies for thee, together with the (earthly) physician."³

Brahmā, the first member of the Hindu triad, was the propounder of the healing art—the Āyurveda or the Science of Life. It is said to be an Upaveda of R̥gveda.⁴

Dhanvantari, however, taught Suśruta that it had been composed by Brahmā as a sub-division of the

¹ भिषक्तमम् वा भिषजां सुधीनि । II. 7. 16.

² प्रथमो दैव्य भिषक् । Ch. V.

³ AV. II. 9. 5. Bloomfield's Translation.

⁴ ऋग्वेदस्यायुर्वेद उपवेदः । Carana Vyūha by Vyāsa.

1. *Śalya Tantra* or Major Surgery : This part deals with the description and uses of the various surgical instruments and appliances, the preparation and properties of caustics and actual cautery, the methods of removing foreign substances introduced into the body from outside, as grass, wood, stones, sand, iron, earth, bones, hair, nails, or formed inside the body, as pus, blood, etc., also the foetus within the womb and the diagnosis of inflammatory swellings.²

2. Śālākya Tantra or Minor Surgery : It treats of diseases of parts of the body situated above the clavicles, such as the diseases of the eyes, nose, mouth, ears, etc., and their treatment.³

3. *Kāya Cikitsā* or Medicine : It deals with the inner medicine, *i.e.*, the constitutional diseases of the body such as Fever, Diarrhoea, Hæmorrhage, Consumption, Insanity, Epilepsy, Leprosy, Urinary disorders, etc., and their cures.⁴

¹ इह खल्लायुर्वेदो नाम यदुपाङ्गमथर्ववेदस्यानुपाद्यैव प्रजाः श्लोकशतसहस्र-
संख्यायसहस्रं कृतवान् स्वयम्भूः । ततोऽप्यायुष्टमत्यन्तधन्वश्चावलीक्य नराणां
भूयोऽष्टधा प्रणीतवान् । तदयथा । शल्यं शलाक्यं कायचिकित्सा भूतविद्या कौमार-
भृत्यमगदतन्त्रं रसायनतन्त्रं वाजीकरणतन्त्रमिति । S. S. f. i.

² तत्र शल्यं नाम विविधलक्षकाष्टपाषाणपांशुलोहलोद्रास्थिवालनखपूयासावान्तर्गभ-
शल्येद्वारणार्थं यत्रशस्त्रद्वाराग्निप्रणिधानत्रक्षविनिययर्थात् । Ibid.

³ शालाक्यं नाम ऊर्ध्वजलगतानां रोगाणां श्ववर्णनखनवदनप्राणादिसंश्रितानां व्याधिनामपशमनार्थम् । *Ibid.*

⁴ कायचिकित्सा नाम सर्वाङ्गसंस्तानां व्याधीनां ज्वरातिसाररक्तपित्तशोथोन्मादा-
पक्षार कृष्णमेहदौनामपशमनार्थः । *Ibid.*

4. *Bhūta Vidyā* or Demonology : It dictates the rules to be observed in performing the various religious procedures, in offering sacrifices to the gods and in conciliating the planetary influences, etc., in order to cure the mental derangements due to being possessed by a Deva, or an Asura, or a Gandharva, or a Yakṣa, or a Rākṣasa, or a Pitr (any ancestral spirit), or a Piśāca, or a Nāga.¹

5. *Kaumārabhṛtya* or the Science of Pædiatrics : It treats of the management of infants and advises us as to the means of rectifying the morbid conditions of milk of the wet-nurses and of curing various diseases caused by unwholesome milk and planetary influence.²

6. *Agada Tantra* or Toxicology : It deals with the methods of diagnosis and treatment of the poisonous bites of snakes, insects, spiders, scorpions, mice, etc., and with the means of curing patients suffering from poisoning due to an incompatible combination of food.³

7. *Rasāyana* or the Science of Tonics : It treats of medicines which preserve youth, prolong life, promote intelligence and strength, and give power to resist diseases.⁴

8. *Vājīkaraṇa Tantra* or the Science of Aphrodisiacs : It treats of remedies for increasing the quantity of semen when it is scanty, rectifying its morbid conditions, revigorating when it is wasted, regenerating its losses, and also for stimulating sexual desire.⁵

¹ भूतविद्यानाम देवासुरगन्धर्वयक्षरक्षःपितृपिशाचनागवह्मद्युपसृष्टचितसां शान्तिकर्मबलिहरणादि यक्षोश्मनार्थः । S. S. I. i.

² कौमारभृत्यं नाम कुमारभरणधात्रीबीरदीपासंशोधनार्थं दुष्टक्षत्तव्यहससुत्यानाञ्च स्वाधीनामुपशमनार्थः । *Ibid.*

³ अगदतन्त्रं नाम सर्पकीटप्लुताग्निशिकसूषिकादिदृष्टविषव्यञ्जनार्थं विविधविषसंयोगविषोपशोपशमनार्थः । *Ibid.*

⁴ रसायनतन्त्रं नाम वयःस्थापनमायुर्ध्मावलंकरं रोगापहरणसमर्थञ्च । *Ibid.*

⁵ वाजीकरणतन्त्रं नाम अल्पदुष्टविषुष्कलीणरितसामाध्यायनप्रसादोपवयजनन-निमित्तं प्रहर्षजननार्थञ्च । *Ibid.*

In the Caraka and Suśruta Saṁhitās, Brahmā is said to be the originator of medical science. This belief in the divine origin of medical knowledge was shared also by other nations, in ancient times. The Egyptian priests believed that Thoth was the inventor of science in general. The authorship of the oldest Egyptian works on medicine is ascribed to him. The works of Thoth were ultimately incorporated into the so-called Hermetic Books, six of which treated of medicine, anatomy and cure of diseases. The King Osiris and his son Horus, the Egyptian sun-god, are also reputed as inventors of medicine. Thoth, Osiris and Horus may be compared with Brahmā, Dakṣa and Sun (Bhāskara) as inventors of the Art of Healing. The Egyptian Thoth was known to the ancient Greeks as Hermes, and "Greek scholars trace the Greek Hermes to an Indian source, and assume the existence of two gods of the same name."¹

Le Clerk traces the origin of the science of medicine as far back as the time of Adam, the title of his fourth chapter being "*Le Premier Homme a été, en certain sens, le premier Médecin.*" If we carry the history still further back, we are drifted on the table-land of legend—a land enveloped in impenetrable mist and darkness, a land of unrealities, like Chaos.

In Greek literature, the earliest allusion to the healing art is found in Homer, who represents it as derived from the gods. Horus was identified by the Greeks with their Apollo, and to him the discovery of the science of medicine is attributed.² The Greeks also traced the origin of the healing art to Asclepius, a deified son of Apollo.

¹ Wootton, *Chronicles of Pharmacy*, Vol. I, p. 5.

² *Inventum medicina meum est, opiferaque per orbem,
Dicon; et herbarum subjecta potentia nobis.*

Ovid.

The concurrent testimony of all the ancient nations supports the divine origin of the science. The belief is confirmed by Hippocrates (*Liber de Vet. Med.*), and by Cicero—"Deorum immortalium inventioni consecrata est ars medica."—*Tusc. Lib. iii.*

Wootton quotes some passages from the *Ecclesiasticus*: "The Lord hath created medicines out of the earth and he that is wise will not abhor them, etc.," and concludes: "The idea that physicians get their skill direct from God is prominent in these passages and is perhaps truer than we are willing to admit in this age of curricula and examinations."¹

Dr. Ryan² remarks:—"All medicine is derived from God, and without his will it cannot exist or be practised. Hence the healing art, if disunited from religion, would be impious or nothing. Illness requires us to implore the Deity for assistance and relief, and humbles human pride. The seeds of the art, the wonderful cures, and the powers of remedies, are in the hand of God. He has beneficently supplied various remedies, and pronounces with our tongues, the fate, life and death, of man. Whence, we see the dignity of medicine, and what reverence is due to the Divine Author of it. Sacred history confirms this sentiment, "Every cure is from God." "The Most High created medicines out of the earth." Every thing we enjoy are the gifts of God: none but the impious ever doubted this truth; none but fools dared to deny it.

"It is recorded that Jesus, the son of Sirach, was one of the first who attributed the origin of medicine to the Deity. And we also read in Scripture, 'Honour the physician for the need thou hast of him, for the Lord hath created him.'

¹ Wootton, *Chronicles of Pharmacy*, Vol. I, p. 48.

² Dr. Ryan, *Medical Jurisprudence*, 2nd ed., 1836, pp. 3-4.

“All medicine is from God, and without him it cannot exist or prosper; our art, disunited from religion, is either impious or nothing.”¹ Such is the first precept in the moral statutes of the Italian Universities, and it is that of Roderic a Castro, in his *Medico-Politica*, and of the profession in all countries.

“The fate of the sick and the success of medicines are in the hand of the Deity: ‘in him we live, move, and have our being’; and our curative means, and our knowledge of the nature and treatment of diseases, are subservient to his divine will and pleasure.”

MSS. of *Āyurveda*:—Bik. Cat. 1382, 1383. *Āyurveda Rasāyana*: But the colophon इति हेमाद्रिकायामायुर्वेदरसायने, etc., proves it beyond doubt, to be a commentary by Hemādri.

References:

1. *Sr̥ruta Samhitā*, I. i.
2. Bower MS. (where he teaches the *Aśvins* about the *Chebulic Myrobolana*).²
3. *Gada Nigraha*,³ Vol. II, p. 675, *Haritaki kalpa*.

¹ “Omnis medicina a Deo est. Cœlitus delapsa non sine Dei consilio vivit agitque. Hinc ars nostra sine religione, vel impia vel nihil.”—*La Politica del Medico nell' esercizio dell' arte sua*. Dal celebre Alessandro Knippe Macoppe, Professore di Medicina nell' J. R. Università di Padova. Milano, 1826.

² Hoernle's Ed., Ch. XI, p. 164.

³ मुखोपविष्टं ब्रह्माणमग्निनौ वाक्ममूचतुः ।

कुतो हरीतकी जाता कतिजातिश्च कौर्व्यते ।

* * * * *

* * * * *

एतत्प्रश्नं यथावृष्टं भगवन् वक्तुमर्हति ।

अग्निनोवचनं श्रुत्वा ब्रह्मा वचनमब्रवीत् ॥

4. He is also referred to in the Brahma Vaivarta Purāṇa¹ as the originator of the medical science from the four Vedas.

¹ ऋग्यजुः सामाथर्व्याण्यान् दृष्ट्वा वेदान् प्रजापतिः ।

विचिन्त्य तेषामर्थञ्चैवायुर्वेदं चकार सः ॥

कृत्वा तु पञ्चमं वेदं भास्कराय ददौ विभुः ।

स्वतन्त्रसंहितां तस्मात् भास्कराय चकार सः ॥

भास्कराय स्वशिष्येभ्य ऋायुर्वेदं स्वसंहिताम् ।

प्रददौ पाठयामास ते चक्रुः संहितासातः ॥

तेषां नामानि विदुषां तन्त्राणि तत्कृतानि च ।

व्याधिप्रणाशवीजानि साध्वि मची निशामय ॥

धन्वन्तरिर्दिवोदासः काशिराजोऽश्विनीसुतौ ।

नकुलः सहदेवोऽकिंशवनी जनको बुधः ॥

जाबालो जाजलिः पैलः करधोऽगस्त्य एव च ।

एव वेदाङ्गवेदशाः षोडश व्याधिनाशकाः ॥

चिकित्सातत्त्वविज्ञानं नाम तन्त्रं मनीहरम्

धन्वन्तरिभ्य भगवान् चकार प्रथमे सति ॥

चिकित्सादर्शनं नाम दिवोदास्यकार सः ।

चिकित्साकौमुदीं दिव्यां काशिराज्यकार सः ॥

चिकित्सासारतन्त्रञ्च धमद्रश्चाश्विनीसुतौ ।

तन्त्रं वैद्यकसर्वस्व' नकुलस्य चकार सः ॥

चकार सहदेवस्य व्याधिसिन्धुविमर्दनम् ।

ज्ञानार्णवं महातन्त्रं यमराज्यकार ऋ ॥

अवनी जीवदानञ्च चकार भगवाद्यधिः ।

चकार जनको योगी वेदासन्देहभञ्जनम् ॥

सर्वसारं चन्द्रसुतो जाबालस्तन्त्रसारकम् ।

वेदाङ्गसारं तन्त्रञ्च चकार जाजलिर्मुनिः ॥

5. *Aṣṭāṅga Hṛdaya Saṁhitā*, I. i.¹

6. *Bhāva Prakāsa*, I. i.²

7. He is also mentioned in *Vraṇa Cikitsā Grantha* as to have introduced, horn, leeches and sharp instruments in medical practice.³

Books :

1. *Āyurveda* : This has been described before.

2. *Brahma Saṁhitā* : *Bhāva Miśra* alludes to this work as being composed by *Brahmā*.

Formulæ ascribed to *Brahmā* :—

Name	Book	Author
1. <i>Sarvāṅga Sandara Rasa</i>	R. S. S., p 109	<i>Brahmā</i> .
2. <i>Vātakulāntaka Rasa</i>	" p. 310	"
3. <i>Caturmmukha Rasa</i>	" p. 318	<i>Caturmmukha</i>
4. <i>Āmavāta Gaja Simha Modaka</i>	" p. 344	<i>Vidhi</i> .
5. <i>Vijayānanda</i>	" p. 432	<i>Brahmā</i> .
6. <i>Sūtikāghna Rasa</i>	" p. 458	"
7. <i>Nilkanṭha Rasa</i>	" p. 482	"
8. <i>Mṛtasañjivana-agada</i>	C. D., p. 344	"
9. <i>Vṛhat Agnimukha Cūrṇa</i>	G. N., Vol. I, p. 82	"
10. <i>Vṛhat Sārasvata Cūrṇa</i>	" " p. 84	"
11. <i>Candra Prabhaḥ Guḍīkā</i>	" " p. 119	"

पैलो निदानं करयस्तन् सर्वधरं परम् ।

हैधनिर्ययतन्त्र चकार कुम्भसम्भवः ॥

चिकित्साशास्त्रबीजानि तन्वाख्येयानि षोडश ।

व्यधिप्रणाशबीजानि बलाधानकराणि च ॥

Brahma Vaivarta Purāṇa, *Brahmakhaṇḍa*, Ch. XVI.

1. ब्रह्मा स्मृत्याऽऽयुषोवेदं प्रजापतिमजियहन् ।

2. विधाताऽयन् सर्वस्वमयायुर्वेदं प्रकाशयन् ।

स्नानाचारहितं चक्रे लघुदीकमयीश्वरम् ।

3. शङ्खं षडङ्गुलं रक्तं जलूकम् दादशाङ्गुलम् ।

शास्त्रमङ्गुलमविषं ब्रह्मणा निर्मितं पुरा ॥

Name	Book	Author
12. Sāyambhuva Guggula	G. N., Vol. I, p. 129	Sāyambhuva.
13. Mācikasava	" " p. 177	Brahmā
14. Daśasāra Sarpi	Vaidya Grantha, GOML, 13220	"
15. Karpāsmṛta Taila	Rasa Saṅketa Kalikā, p. 30	"
16. Sahacara Oil	Bower MS., p. 109	Sāyambhuva.

1. SARVĀṅGA SUNDARA RASA.

सर्वाङ्गमुन्दरो रसः ।

गुह्यस्तत्र गन्धश्च विषश्च जयपालकं ।

कटुवयश्च विफला टङ्गणश्च समाश्रकं ॥

अस्य भावा प्रयोक्तव्या गुञ्जाचयसमाततः ।

सर्वेषु ज्वररोगेषु सामवाते विशेषतः ॥

नाशयेत् आसकासश्च अग्निमान्द्यं विशेषतः ।

ब्रह्मणा निर्मितः पूर्व्वं रसः सर्वाङ्गमुन्दरः ॥

2. VĀTAKULĀNTAKA.

वातकुलान्तकः ।

मृगनाभिः शिवा नागकेशरं कलिहचक्रं ।

पारदं गन्धकं जातीफलमेला खवङ्गकं ।

प्रत्येकं कार्ष्णिकश्चैव क्षणाचूर्णानि कारयेत् ।

जलेन मर्दयित्वा तु वटीं कुर्याद्द्विरङ्गिकां ।

यथा व्याध्यनुपानेन योजयेच्च चिकित्सकः ।

अपक्वारी मद्वाचोरे मूर्च्छारोगे च शस्यते ।

वातजान् सर्व्वरोगांश्च हन्त्यादचिरसेवनात् ।

नातः परतरं श्रेष्ठमपक्वारीषु वर्त्तते ।

ब्रह्मणा निर्मितं पूर्व्वं नाया वातकुलान्तकः ॥

3. CATURMMUKHA RASA.

चतुर्मुखोरसः ।

रसगन्धकलीहाथं समं सूताङ्गि हस च ।

सर्व्वं खल्लतले चिन्ना कन्यास्तरसमर्हितं ।

एरण्यपर्वरावेष्ट्र धान्यराशी दिनवयं ।
 संस्थाप्य च तदुक्तं विफलारससंयुतं ।
 एतद्रसायनवरं सर्वरोगेषु योजयेत् ।
 तद्वययाग्निलं खादद्दलीपलितनाशनं ।
 पौष्टिकं बलमायुषं पुत्रप्रसवकारकं ।
 चयमेकादशविधं कारं पञ्चविधन्तथा ।
 कुष्ठमष्टादशविधं पाण्डुरोगान् प्रमेहकान् ।
 गुलं शस्य हिक्काश्च सन्दाग्रिचाम्पित्तकं ।
 अपक्वारं महीन्मादं सर्व्वांशंसि त्वगामयान् ।
 क्रमेण शीलितं हन्ति वृचमिन्द्राशनिर्यथा ।
 जगताश्च हितार्थाय चतुर्मुखमुखोदितः ।
रसचतुर्मुखो नाम चतुर्मुख इवापरः ॥

4. ĀMAVĀTA GAJA SĪMHA MODAK.

आमवातगजसिंहमोदकः ।

गृष्ठीचूर्णस्य प्रस्थैकं यमान्याय पलायकं ।
 जीरकस्य पलं द्वे च धन्याकश्च पलद्वयं ।
 पलैकं शतपुष्याया लवङ्गस्य पलन्तथा ।
 टङ्गणस्य पलं भृष्टं मरिचस्य पलानि च ।
 विहता-विफला-चार-पिण्डीनां पलन्तथा ।
 शठपेला तेजपत्रश्च चविकानां पलन्तथा ।
 अभं लौहं तथा वङ्गं प्रत्येकश्च पलं पलं ।
 एतेषां सर्व्वांशानां खण्डं दद्यात् गुणवयं ।
 हृत्तन मधुना मिश्रं कर्षमावन्तु मोदकं ।
 एकैकं भक्षयेत् प्रातर्घृतवानुपिवेत् पयः ।
 गुल्मी रक्तपित्तशाम्पित्तविनाशनः ।
 आमवातकुलज्ज्वलं कौशरी विधिनिर्मितः ॥

5. VIJAYĀNANDA.

विजयानन्दः ।

शुद्धसूतस्य भागैकं दिभागं शुद्धतालकं ।
 स्रुतकटाहान्तरे पूर्व्वं स्थापयेच्च समन्तकं ।
 दयोः समं पलाशस्य भस्मा तस्योपरि लिपेत् ।
 वक्त्रं स्रुतकपर्पटे लिप्त्वा शीघ्रयेच्च खरातपे ।
 चतुर्भिर्दशतियामन्तु पश्चात् श्रौतलतां नयेत् ।
 अवतार्य काचपात्रे स्थापयेदतियवतः ।
 विधिवत् सेवितयासौ हन्ति श्रित्वं चिरन्तनं ।
 सर्व्वकुष्ठं निहन्त्यायु भास्करस्मिमिरं यथा ।
 रसोयं श्रित्वनाशाय ब्रह्मणा निश्चितः पुरा ।
विजयानन्दनामायं निगूढः चितिमण्डले ॥

6. SŪTIKĀGHNA RASA.

सूतिकाघ्नोरसः ।

रसगन्धकलोहाम् जातीकीथं सुवर्णकं ।
 समान्शं मर्दयेत् खल्ले छागीदुग्धेन पेययेत् ।
 गुग्गाद्वयप्रमाणेन वटिकां कुरु यवतः ।
 न्वरातीसाररोगघ्नः सूतिकातङ्कनाशनः ।
सूतिकाघ्नो रसो नाम ब्रह्मणा परिकीर्तितः ॥

7. NĪLKANTHA RASA.

नीलकण्ठोरसः ।

सूतकं गन्धकं लौहं विषं चित्तकपद्मकं ।
 बराह्वरेणुकासुक्तं यम्येलानागकेशरं ।
 चिकटु-विफला चैव शुलभस्य तथैव च ।
 एतानि समभागानि द्विगुणोगुदं च्यते ।

रुमई वटकं कृत्वाभक्षयेषणकोन्मृतं ।
 कासि त्रासे चये गुर्वे प्रमेहे विषमज्वरे ।
 हिकायां गृह्णीदोषे शोथे पाण्डुमये तथा ।
 सूचकं मूदगर्भे वातरोगे च दातुम् ।
 नीलकण्ठो रसो नाम ब्रह्मणा निर्मितः पुरा ।
 अनुपामविशेषेण सर्वरोगहरो भवेत् ॥

8. MRTASĀNĪVANA AGADA.

मृतसञ्जीवनोऽगदः ।

पृक्कावस्थोपेयकाक्षीशैलेयरोचनातगरम् ।
 ध्यामकं कुडुमं मांसी सुरसायैलालकुष्ठम् ॥
 हृत्तीशिरौषपुष्प-त्रीवेष्टकपद्मचारटौविशालाः ।
 सुरदारुपत्रकेशर-शावरकमनःशिलाकौन्त्यः ॥
 जालकं पुष्पसर्पप-रजनीहयहिङ्गुपिप्पलीलाक्षाः ।
 जलसुदपथीमधुकमदनकफलसिन्धुवाराक्ष ॥
 सम्पाकलोधूमयूरकगन्धफलीनाकुलीविडङ्गाश्च ।
 पूष्येयोदृत्य समं पिष्टा गुडिका विधेयाः स्युः ॥
 जनुविषघ्नो जयकृद विषमृतसञ्जीवनो ज्वरनिहन्ता ।
 त्रैयविलिपनधारणधूमयहणैर्गृहस्थश्च ॥
 भूतविजयस्त्वल्मीकार्कषणमन्ताग्रशम्भरीन् हन्ताम् ।
 दुःस्वप्नस्त्रीदोषानकालमरणांश्चौरभयं ॥
 धनधान्यकार्यसिद्धि-त्रीपुष्टायुर्विवर्धनी धन्यः ।
 मृतसञ्जीवन एष प्रागमृताद्ब्रह्मणाभिहितः ॥

9. VRHAT ĀGNIMUKHA CURNA.

बृहदग्निमुखं चूर्णम् ।

क्षी चारी चित्तकं पाठा विडङ्गं लवणानि च ।
 मृज्जला तगरं भार्गी कारवी हिङ्गु पौष्करम् ॥

सठी दावीं विहङ्गमुक्ता वचा चेन्द्रयवास्तथा ।
 धात्रीजीरकहंखाश्चयेयस्यः सोपकुक्षिकाः ॥
 अश्ववेतसमस्त्रीका दाहिमं सकटुत्रयम् ।
 भङ्गातक्राजमोटं च यवानौ सुरदारु च ॥
 अभयाऽतिविषा चव्या हृषुषारखधस्तथा ।
 तिलसुष्ककशियूणां कोकिलाचपलाशयोः ॥
 चाराण्यमूनि तुल्यानि सूक्ष्मचूर्णानि कारयेत् ।
 लोहकिट्टं च सप्ताहं तप्तं गोमूत्रसेचितम् ॥
 विद्वान्मुभावितं कृत्वा योगेऽग्निप्रक्षिपेत्ततः ।
 मातुलुङ्गरसैव भावयेत्तु दिनत्रयम् ॥
 दिनत्रये तु युक्तेन तद्याऽऽर्द्रं करसेन च ।
 मुभावितं ततः कृत्वा भक्तमध्ये प्रयोजयेत् ॥
 एषोऽग्निकल्पचूर्णंस्तु नाशयत्यचिराद्गदान् ।
 अजीर्णकं तथाऽऽनाहं पच गुब्बान् सुदुस्तरान् ॥
 गृह्णीपाण्डुरोगांश्च श्रासकासांश्च दारुणान् ।
 अपस्मारं तथोन्मदं विषमं च मदात्ययम् ॥
 प्रणदत्यल्लणानेताव्रष्टमग्निं च दीपयेत् ।
 समस्तव्यञ्जनोपेतं भक्तं कृत्वा तु भोजने ॥
 प्रदद्यादस्य चूर्णस्य विडालपदकं भिषक् ।
 ततस्तद्व्रतां याति कोषलं च प्रपद्यते ॥
 एतदग्निमुखं चूर्णं चूर्णराजो निगद्यते ।
 ब्रह्मणा निम्नितं ह्येतदग्निभ्यां परिकीर्तितम् ॥

10. VRHAT SĀRASVAT CŪRṆA.

वृहदसारस्वतं चूर्णम् ।

कुठाश्वगन्धे लवणाजमोदे च जीरके त्रीणि कटूनि पाठा ।
 माङ्गल्यपुष्पी च समानि चूर्णं कृत्वा तु चूर्णेन वचोद्वेन ॥
 तुल्येन युक्तं बहुशो रसेन तद्भावितं ब्रह्मविनिर्मितायाः ।
 सपिर्मधुभ्यां च ततोऽक्षमात्रं लिङ्गाव्रतः सप्तदिनं हितायौ ।

सौख्यमिच्छन्मनस्य धैर्यं मेधां तथेच्छन्निगुणं च कालम् ।

पटेन्नरः श्लोकसहस्रमज्ञा तद्वत्प्रयुक्तं विगुणं च कालम् ॥

सारस्वतमिदं चूर्णं ब्रह्मणा निर्मितं स्वयम् ।

अग्नितार्थं लीकानां दुर्मेधसां विचेतसाम् ॥

11. CANDRAPRABHĀ GUTIKĀ.

चन्द्रप्रभा गुटिका ।

कौटिल्लेभकषाग्निमागधिजटामुस्ताशठीताप्यकं
भूनिम्बविफलासुराङ्गचविकाव्योषं वचा धान्यकम् ।
रात्रीयुग्मविषादिहृन्मिलवणं चारचिजातान्वितं
कर्षं कर्षमतः पुराद्दृशपलं शैलेयकाष्टान्वितम् ॥
लोहासव सिताचतुष्पलयुतं स्वादशिकायाः पलं
हृन्मयशांसि षडेव गुल्ममजयं शीयं चयं कामलाम् ।
नाङ्गीमर्मगदाञ्जलीदरुजो दीर्घज्वरान्विद्रवौन्
यक्षाणं सभगन्दरं कफमरुत्पित्तोद्भवं पाण्डुताम् ॥
तं तं व्याधिसमूहग्रहविकृतीन्यन्यावुद्वेष्टीपदान्
मेघांश्च कृविनाशमश्मरिजस्तन्वांश्च देहस्थितान् ।
व्याधीन्हन्ति हृदाननेन विधिना चन्द्रप्रभा सेविता
मन्दाग्नेः परमं प्रदीपनमियं कुर्याज्जरां जर्जराम् ॥
स्वेच्छाहारविधौ च पानविषये शीतातपे मेधुने ।
भुक्तं नास्ति विरोधितं च सततं प्रोक्ता पुरा ब्रह्मणा ॥

12. SĀYAMBHUVA GUGGULA.

सायम्भुवो गुग्गुलुः ।

शशिरिषा पञ्चपलं तावन्निरिजश्च गुग्गुलोद्देशश्च ।
ताप्यस्य पलमितयं च लोहाच्छवणिकायाश्च ॥
विफलाकरञ्चपल्लवखदिरगुडूचीवचाचिह्नो-
मुस्ताविडङ्गरजनीचतुरङ्गुलवज्रिकुटजैश्च ॥

पलिकैश्चूर्णमितन्मूत्रेण गवां पिबेन्नरः प्रातः ।
 कुठ्ठी घृतमधुमिश्रं जयत्यस्य्वातमचिरं ॥
 श्रिताणि कुठकोठी विषगरगुल्मीदरप्रमेहांश्च ।
 उन्मादभगन्दरमपस्मृतिद्वीपदहमित्रासान् ॥
 जयति बलीपलितानि च योगः स्वायम्भुवः प्रोक्तः ॥

13. MĀCIKĀSAVA.

माचिकासवः ।

माचिकायाः शतार्धं तु द्रोणेऽपां च विपाचयेत् ।
 चतुर्थशेषे तस्मिंस्तु पूते शीते प्रदापयेत् ॥
 गुडश्च द्विशतं दत्त्वा तत्सर्वं घृतभाजने ।
 विडङ्गपिप्पलीकृष्णालगोलापतकैसरैः ॥
 मरिचैश्च तथा चूर्णं सम्यक्कुला विचक्षणः ।
 क्षिपेच्च पालिकैर्भागैर्घटनीयं समन्ततः ॥
 ततो यथाबलं पीत्वा कासश्चासगलामयान् ।
 ऋनि यक्षाणमल्युग्रसुरःसन्धानकारकः ॥
माचिकासव इत्येष ब्रह्मणा निर्मितः पुरा ।

14. DASASĀRA SARPI.

दशसार सर्पिः ।

वाशामलूचीनिर्गुण्डौ हृत्तौदयभङ्गराट् ।
 कासमर्दोऽपि भूनिम्बावर्षाभूवस्ववह्निका ॥
 समूलपतं निष्पीड्य कुङ्कुमेन पृथक् पृथक् ।
 हृतेनानेन तुल्येन समानानेव पाययेत् ॥
 कासान् पञ्चविधान् * * * यानेकदसूक्तः ।
दशसारनिदं सर्पिः ब्रह्मणा निर्मितं पुरा ॥

15. KARNĀMṚTA OIL.

कर्णाशृतं तैलम् ।

रामटं निम्बपत्राणि फेनः सागरसम्भवः ।

एतानि समभागानि तद्द्वये सितं विषम् ॥

गोमूत्रेण समायुक्तम् कटुतैलं विपाचितम् ।

तेनैव पूरयेत्कर्णं नरकुञ्जरवाजिनाम् ॥

कर्णरीमं निहन्त्यायुः क्षपनाच्छिरसौ गदान् ।

नाथा कर्णाशृतं तैलं ब्रह्मणा निर्मितं स्वयम् ॥

16. SAHACARA OIL.

महचर तैलम् ।

The authorship of this formula is also attributed to Bhela. For a description of the preparation, see the formulæ ascribed to Bhela.

Disciples of Brahmā: According to Suśruta,¹ Brahmā is said to have first instructed Prajāpati Dakṣa in the science of medicine. The Aśvin twins learned it from Dakṣa. They communicated the knowledge to Indra, who in his turn, promulgated the science to Dhanvantari. He appeared on the earth as Divodāsa Dhanvantari, King of Benares, and taught Suśruta and others the science and art of surgery as well as the other branches of the medical science.

Caraka,² however, on the authority of Agniveśa as instructed by Punarvvasu Ātreya, mentions Bharadvāja, as the disciple of Indra. He taught Punarvvasu and other sages. Punarvvasu Ātreya imparted his knowledge to his

¹ Suśruta Saṁhitā, I. i.

² Caraka Saṁhitā, I. i.

six students, Agniveśa, Bhela, Jatukarṇa, Parāśara, Hārta and Kṣārapāṇi. Caraka redacted Agniveśa's work, and Dṛḍhavalā supplied the last forty-four chapters and edited the entire compendium.

In the *Brahma Vaivarta Purāṇa*,¹ Brahmā is said to have given the *Āyurveda* to Bhāskara (the sun-god) who is represented as the fountain of all medical knowledge. Dhanvantari, Divodāsa, the Asvin-pair and others learned the science from Bhāskara, and composed original treatises on medicine.

Vāgbhaṭa II² is of opinion that the sons of Atri and other sages learned the science of medicine from Indra. Aruṇadatta³ in his commentary mentions Ātreya, Dhanvantari, Nimi, Kāśyapa, as disciples of Indra. Ātreya's students were Agniveśa and his colleagues.

Bhāvamiśra⁴ describes Indra as the preceptor of Ātreya, Bharadvāja and Dhanvantari. Ātreya was the teacher of Agniveśa and five other sages. Dhanvantari taught Suśruta and his companions. Caraka is described by him as an incarnation of Anantadeva, the serpent-god, who is said to have acted as the custodian of the Vedas and the *Āyurveda* when Nārāyaṇa rescued the Vedas in his Fish Incarnation.

See foot-note 3, p. 6.

¹ *Aṣṭāṅga Hṛdaya Saṁhitā*, I. i.

अविषुच आदेय आदिवेषा धन्वन्तरिमिकाश्यादीनां त एवं ते चादेयादयोऽग्नि-
वेशादिकानजिगृहन् ।

Sarvāṅga Sundara, I. i.

Bhāva Prakāśa, I. i.

VIṢṆU

In the R̥gveda, Viṣṇu is described as striding through the seven regions of the universe in three steps¹—a legend which the Pauranic authors dilated upon and which culminated into the story of “Vāmana Avatāra” or the Dwarf Incarnation of Viṣṇu and Vali Rājā. Yāska² and his commentator Durgācāryya³ identify him with the Sun-god. Max Müller adopts their views and remarks : “The stepping of Vishnu is emblematic of the rising, the culminating, and setting of the sun.”⁴ In the Mahābhārata and the Purāṇas, he is the second member of the Hindu triad and is known as “the Preserver.”⁵

- ¹ अतो देवा अवंतु नो यतो विष्णुर्विचक्रमे ।
 पृथिव्याः सप्त धामनिः ॥१६॥
 इदं विष्णुर्वि चक्रमे वेधा नि दधि पदं ।
 समूलहमस्य पामुरे ॥१७॥
 त्रीणि पदा वि चक्रमे विष्णुर्गोपा अदाभ्यः ।
 अतो घर्माणि धारयन् ॥१८॥

R̥gveda, I. xxii.

- ² यदिदं किञ्च तद्विक्रमते विष्णुः । विधा निधत्ते पदं । वेधा भावाय पृथिव्यां
 अन्तरिक्षे दिवि इति शाकपूणिः । समारोहणे विष्णु पदे गयशिरसि इति श्रीर्षवामः ।

Nirakṭa, 12. 19.

विष्णुरादित्यः । कथमिति यत आह वेधा निधत्ते पदं निधत्ते पदं निधानं
 पदेः । क तत् तावत् । पृथिव्यां अन्तरिक्षे दिवि इति शाकपूणिः । पार्थिवोऽग्निर्भूत्वा
 पृथिव्यां यत्किञ्चिदसि तद्विक्रमते तदधितिष्ठति । अन्तरिक्षे वैद्युतात्मना । दिवि
 सूर्यात्मना यदुक्तं तसू अक्रियन् वेधा भूवे कमिति । समारोहणे उदयशिरौ उदयन्
 पदमेकं निधत्ते । विष्णु पदे मध्यन्दिनेऽन्तरिक्षे । गयशिरस्त्रसं गिरौ इति श्रीर्षवाम
 आचार्यो मन्यते ।

Durgācāryya.

Translation of the R̥gveda, Vol. I, p. 117. (1869)

सृष्टिस्थित्यन्तकरणान् ब्रह्माविष्णुशिवान्तिका ।
 स संज्ञां याति भगवान् एक एव अनाद्विनः ॥

He is a popular deity, and his worshippers recognise in him the Supreme Being. His wife is Lakṣmī, the goddess of fortune; his heaven is Vaikuṇṭha, and his vehicle is the fabulous bird Garuḍa. He has thousand names of which Nārāyaṇa (*lit.*—moving in water) is the most common. It is said that all kinds of fever are cured when prayer is offered to him by the recital of his thousand names.¹

He is referred to in the Bower MS., as the deviser of the Siddhārtha (or efficacious) oil.² The formula occurs both in the Vaṅgasena and the Cakradatta under the name of Nārāyaṇa. In the Tattva Candrikā, Sivadāsa explains the name as derived either from its author, Viṣṇu or Nārāyaṇa, or from the principal drug 'Satāvari' which has a synonym Nārāyaṇi.³ The formula has however a distinct name Siddhārtha, and it is elsewhere ascribed to Viṣṇu.

Formulae ascribed to Viṣṇu :—

Names.	Authors.	Books.
1. Nārāyaṇa Taila Siddhārtha Taila	Nārāyaṇa	C. D., xxii. p. 135. Śataśloki, p. 48. Sāraṅgadhara, p. 161. Bower MS., p. 188.
2. Satāvari Taila	Viṣṇu	G. N., Vol. I, p. 38.

ब्रह्मले सृजते चैव विष्णुले पाति नित्यशः ।

रुद्रले चैव संहृता एको देवसिधा स्थितः ॥

Agni Parāṇa, Svargānuśāsana Chapter.

विष्णुं सहस्रमूर्धनं चराचरपतिं विभुम् ।

मावन् नामसहस्रेण ज्वरान् सर्वान् व्यपोहति ॥

Cakradatta, I. v. 183.

Gaḍa Nigraha.

* Bower MS., p. 188.

³ नारायण संज्ञा चास्य विष्णुनिमित्तत्वात्, यत्तावदेत रस साधितात्वात् ।

Tattva Candrikā, Vāṭaryādhi Cikitsā.

Names.	Authors.	Books.
3. Svalpa Nārāyaṇa Taila	Viṣṇu	V. S. XXIV. vv. 283-292, p. 373.
„ Viṣṇu Taila	„	Bhaiṣajyaratnāvalī. V. S. XXIV. vv. 268-275, p. 371.
4. Madhyama Nārāyaṇa Taila	„	V. S. XXIV. vv. 293-302, p. 374. C. D., XXII. 66, p. 135.
5. Mahā „ „	„	V. S. XXIV. vv. 303-315., p. 375. C. D., XXII. 67, p. 135. V. K. V., p. 213.
Vṛhat Viṣṇu Taila	„	Bhaiṣajyaratnāvalī.
6. Viṣṇu Taila	„	V. S. XXIV. vv. 268-275, p. 371. C. D., XXII. v. 78., p. 134.
7. Vṛhat Śrīgāra Abhra	„	R. S. S., pp. 290, 484.
8. Nityodaya Rāsa	„	„ p. 291.
9. Āmarātesvara	„	„ p. 342.
10. Sarvāṅga Sundara Rāsa	„	„ p. 351.

1. NĀRĀYAṆA TAILA.

नारायणतैलम् ।

विस्त्राग्निमन्यः श्लोणाकः पाटलः पारिमद्रकः ।

प्रसारण्यगन्धा च वृष्टी कष्टकारिका ॥

बला चातिबला चैव चर्दद्रा सपुनर्नवा ।

एषां दशपलान् भागांश्चतुर्द्वेष्टिऽभसः पचेत् ॥

पादशेषं परिखाव्य तैलपत्रं प्रदापयेत् ।

शतपुष्पा देवदारु मांसी शैलियकं बचा ॥

चन्दनं तगरं कुष्ठमेला पर्णीचतुष्टयम् ।

रास्त्रा तुरगगन्धा च सैन्धवं सपुनर्नवम् ॥

एषां द्विपलिकान् भागान् पेषयित्वा विनिक्षिपेत् ।

शतावरीरसश्चैव तैलतुल्यं प्रदापयेत् ॥

आजं वा यदि वा गव्यं चीरं दत्त्वा चतुर्गुणम् ।
 पाने वस्ती तथाभ्यङ्गे भोज्ये चैव प्रशस्यते ॥
 अश्वी वा वातसंभग्रो सजो वा यदि वा नरः ।
 पङ्कजः पीठसर्पी च तैलनानि न सिध्यति ॥
 अधोभागे च ये वाताः शिरोमध्यगताश्च ये ।
 दन्तशूलं हनुस्तम्भं मन्वास्तम्भं मलयुधि ॥
 यस्य शुष्यति चैकाङ्गं गतियस्य च विह्वला ।
 धोषेन्द्रिया नष्टशक्ता ज्वरशीघ्राश्च ये नराः ॥
 वधिरा लङ्गजिह्वाश्च मन्दमेधस एव च ।
 अल्पप्रजा च या नारी या च गर्भे न विन्दति ॥
 वातार्चो वषणी येषामन्वहश्चि दाहणा ।
 एतत् तैलवरं तेषां नास्तीति नारायणं स्मृतम् ॥
 तगरं नतमच स्वादभावे शियलिङ्गीपङ्कः ॥

2. SATĀVARĪ TAILA.

शतावरीतैलम् ।

शतावरौरसप्रस्थं चीरप्रस्थं तथैव च ॥
 शतपुष्पा दीवद्राक्ष मांसी शैलेयकं बला ।
 चन्दनं तगरं कुष्ठमिला सांयुमती तथा ॥
 एतेः कर्षसमैसांगैस्तैलप्रस्थं विपात्रयेत् ।
 कुष्ठवामनपङ्कनां वधिरव्यङ्गकुष्ठिनाम् ॥
 वायुना भग्नदेहानां योऽवसीदन्ति मेघुने ।
 जराजर्जरदेहानां वध्मार्तमुखशोषिणाम् ॥
 त्वग्गताद्यापि ये वाताः सिरास्त्रायुगताश्च ये ।
 सर्वांस्तान्नाशयत्याय तैलं नाप्यत्र संशयः ॥
 नारायणमिदं नास्तीति विष्णुना समुदाहृतम् ।
 दशाङ्गमिति विख्यातं न कचिन्नतिहिन्यते ॥

3. SVALPA VIṢṆU TAILA.

स्वल्पविष्णुतैलम् ।

शालपर्णीपुत्रिपर्णीबलागोरक्षतण्डुलाः ।
 एरण्डस्य च मूलानि वृहत्थोः पूतिकस्य च ॥
 शतावरी सहचरं पंचदेतैः पलांश्चितैः ।
 तैलं प्रस्थं द्वयो दत्त्वा गव्यं वाजं चतुर्गुणं ॥
 अस्य तैलस्य पक्षस्य ऋणु वीर्यमतः परं ।
 वातार्त्ता नरनागाश्च पीत्वा हृदतनुत्वचः ॥
 कृत्पाश्वशूले वातास्त्रे गलगच्छेऽर्हि तेजयि ।
 शर्कराश्मरिपाण्डुत्वकामलाह्वावर्भदके ॥
 चौणेन्द्रियेऽन्नहर्द्धौ च जराजर्जरिते हितं ।
 स्त्रीषामश्वतरीणाञ्च गर्भस्थितिकरं परं ॥
 एतदङ्गवत् तैलं विष्णुना परिकीर्तितम् ।

4. MADHYAMA NĀRĀYAṆA TAILA.

मध्यमनारायणतैलम् ।

This is the popular name of Nārāyaṇa Taila. An English translation of the formula is given in Dutt's *Materia Medica of the Hindus*, p. 261.

5. MAHĀ NĀRĀYAṆA TAILA.

महानारायणतैलम् ।

शतावरी चांशुमतौ पुत्रिपर्णी शटी बला ।
 एरण्डस्य च मूलानि वृहत्थोः पूतिकस्य च ॥
 गवेषुकस्य मूलानि तथा सहचरस्य च ।
 एषां दशपलान् भागान् जलद्वये विपाचयित् ॥
 पादावशेषे पुंते च गर्भचैनं समावपेत् ।
 पुनर्नवा वषा दारु शताह्वा चन्दनानुर ॥

श्रेष्ठं तगरं कुष्ठमला मांसी स्थिरा बला ।
 अथाहा सैन्धवं रास्वा पलाहानि च पेषयेत् ॥
 गव्याजपयसीः प्रस्थौ द्वौ हावन्न प्रदापयेत् ।
 शतावरीरसप्रस्थं तैलप्रस्थं विपाचयेत् ॥
 अस्य तैलस्य सिद्धस्य ग्रणं वीर्यमतः परम् ।
 अन्नानां वातभग्नानां कुष्ठराणां नृणां तथा ।
 तैलमेतत् प्रदातव्यं सर्व्ववातनिवारणम् ॥
 आयुष्मांश्च नरः पीत्वा निययेन दृढो भवेत् ।
 गर्भमश्वतरी विन्दात् किं पुनर्मानुषी तथा ॥
 ऋक्कुलं पार्श्वगुल्मश्च तथेवाडावभेदकम् ।
 अपर्णो गण्डमालाश्च वातरक्तं हनुयुषम् ।
 कामलां पाण्डुरोगश्च अस्मरीचापि नाशयेत् ॥
 तैलमेतदभगवता विष्णुना परिकीर्तितम् ।
नारायणमिति ख्यातं वातान्नकरणं परम् ॥

VRHAT VIṢṆU TAILA.

बृहद्विष्णुतैलम् ।

जलधरमश्वगन्धाजीवकर्षभर्कौ शटी ।
 काकोली चीरकाकोली जीवन्ती मधुयष्टिका ॥
 मधूरिका टैवदार पद्मकाष्ठश्च सैन्धवं ।
 मांसी चैला त्वचं कूर्चं रक्तचन्दनशैलजं ॥
 मञ्जिष्ठा मृगनाभिश्च श्वेतचन्दनकुङ्कुमं ।
 पर्णो कुन्दुरु खोटिय यन्तिकश्च नखी तथा ॥
 एतेषां पालिकैर्भागैस्तैलैश्चापि तथादकं ।
 शतावरीरससमं दुग्धश्चापि समंभवेत् ॥
विष्णुतैलवरं श्रेष्ठं सर्व्ववातविकारनुत् ॥
 ऊर्ध्वावाति छाधोवाति अङ्गविग्रह एव च ॥
 शिरोमध्यगता ये च मन्धास्तथै गलयङ्गैः ।
 यस्य शुष्यति चैकाङ्कं गतिर्यस्य च विब्रलता ॥

चे वातप्रभवारीगा चे च पित्तसमुद्भवाः ।
सर्वास्ताद्वाशयत्याशु सूर्यस्नान द्रवोदितः ॥

6. VIṢṆU TAILA.

विष्णुतैलम् ।

शालपर्णी पृथ्वीपर्णी कला च बहुपुतिकः ।
एरण्डस्य च मूलाणि वृहत्थोः पुतिकस्य च ॥
गवेषुकस्य मूलाणि तथा सहचरस्य च ।
एषान्तु पलिकैः कल्केस्तौलप्रस्थं विपाचयेत् ॥
आजं वा यदि वा गव्यं क्षीरं दद्याच्चतुर्गुणम् ।
अस्य तैलस्य पक्वस्य शृणु वीर्यमतः परम् ॥
अश्वानां वातभयानां कुक्षराणां तथा वृणाम् ।
तैलमेतत् प्रयोक्तव्यं सर्वव्याधिविवारणम् ॥
आयुष्मांश्च नरः पीत्वा निययेन हृदो भवेत् ।
गर्भमन्त्रतरी विन्द्यात् किं पुनर्मानुषी तथा ॥
हृच्छूलं पार्श्वशूलञ्च तथैवाङ्गवर्मेदकम् ।
कामला-पाण्डुरोगघ्नं शर्कराश्लरीनाशनम् ॥
क्षीणेन्द्रिया नष्टशुक्रा ज्वरा अर्ज्जरीकृताः ।
शेषाश्चैव क्षयी व्याधिरन्ववृद्धिश्च दाहणा ॥
अर्द्धितं गलमण्डञ्च वातशोणितमेव च ।
स्त्रियो या न प्रसूयन्ते तासाञ्चैव प्रयोजयेत् ॥
एतदङ्ग वरं तैलं विष्णुना परिकीर्तितम् ॥

7. VRHAT ŚRĠGĀRA ABHRA.

वृहच्छृङ्गाराभ्रम् ।

पारदं गन्धकञ्चैव टङ्गणं नागकेशरं ।
कपूरं जातिकोषञ्च लवङ्गं तेजपत्रकं ॥
एतेषां कर्पभागानि सुवर्णं तत्समं भवेत् ।
शुद्धं कृष्णभस्मञ्च चतुष्कपितुभागिकं ॥

तालीशं घनकुष्ठञ्च मांसी पुष्पवराङ्गकं ।
 एलावीजं त्रिकटुकं विफला करिपिप्पली ।
 एषां कर्षद्वयञ्चैव पिप्पलीकायभावितं ।
 अनुपानं प्रयीतव्यं चोचं क्षौद्रसमायुतं ।
 तानारोगं प्रशमनं विशेषात् कासरोगनुत् ।
 शतिकं पैसिकञ्चैव श्रैभिकं सान्निपातिकं ।
 षष्ठ्युलं पार्श्वयुलञ्च शिरःशूलं विशेषतः ।
 स्वरामयं चयं कुष्ठं श्लेष्माणं वातशोणितं ।
वृश्चिकुङ्काराभ्रनाम विष्णुना परिकीर्तितं ।
 रक्तपित्तञ्च कासञ्च नाशयिन्नात्रसंशयः ॥

8. NITYODAYA RASA.

नित्योदयरसः ।

सुशूलं पारदं गन्धं प्रत्येकं युक्तिसम्भितं ।
 ततः कञ्जलिकां कृत्वा मर्द्दयेच्च पृथक् पृथक् ॥
 विल्लाघ्रमन्वस्थोनाकं काश्मरीपाटला बला ।
 सुस्तं पुनर्नवा धात्री वृश्चिकी वृषपत्रकं ।
 विदारौ बहुपुञ्जी च एषां कषैरसैर्भिषक् ।
 सुवर्णं रजतं ताप्यं प्रत्येकं शाणमात्रकं ।
 पलमात्रान् कृष्णाभं तदर्द्धान् शिलाह्वकं ।
 जातीकोषफले मांसी तालौशैला खवङ्गकं ।
 प्रत्येकं कोलमात्रान् वासान्नीरैर्भिर्मर्द्दयेत् ।
 शीघ्रयित्वातपे पश्चात् विदार्याः पेषयेद्रसैः ।
 द्विगुञ्जां बटिकां कृत्वा पिप्पलीमधुना भजेत् ।
नाम्ना नित्योदयशायं रसो विष्णुविनिर्मितः ।
 पञ्चकासान् नितन्वाथ चिरकालोद्भवानपि ।
 राज्यप्राणमप्ययं जीर्णज्वरमरोचकं ।
 धातुस्यं विषमाप्यञ्च तृतीयकचतुर्थकं ।

अशीसि कामनां पाण्डुमग्निमाद्यं प्रमेहकं ।

सेवनादस्य कन्दर्परूपोभवति मानवः ॥

9. ĀMAVĀTESVARA RASA.

आमवातेश्वरोरसः ।

शुद्धगन्धं पलाशं च सूतताम्रं च तत्समं ।

ताम्राहं पारदं शुद्धं रसतुल्यं सूतायसं ।

सर्वं पञ्चाङ्गुलीनैव भावयेत् पुनः पुनः ।

संचूर्ण्य पञ्चकोलोत्थैः काथैः सर्वं विभावयेत् ।

रौद्रे विंशतिवारांश्च गुडूचीनां रसैर्दृश्य ।

भट्टटङ्गणचूर्णेन तुल्येन सह मेलयेत् ।

टङ्गणाहं विडं देयं मारिचं विडतुल्यकं ।

तिन्तिडीचारतुल्यं च सूततुल्यं च दन्तिकं ।

विकटविफलञ्चैव लवङ्गञ्चाहंभागिकं ।

आमवातेश्वरो नाम विष्णुना परिकीर्तितः ।

महाप्रकारकीर्त्ये ष आमवातान्तकी मतः ।

स्थूलानां कर्षणः ग्रेष्ठः कृशानां स्थौल्यकारकः ।

अनुपानविशेषण सर्वरोगविनाशनः ।

अनेन सहस्रो नास्ति वज्रिदीप्तिकरो महान् ।

गुक्तीशो-यक्ष्मीदोष-शोथ-पाण्डुरुजापहः ॥

10. SARVĀṅGA SUNDARA RASA.

सर्वाङ्गसुन्दरोरसः ।

शुद्धसूतं तथा ताम्रं शिलामाचिकतालकं ।

रजतं स्वर्णवङ्गं च लौहमधुं सनागरं ।

चूर्णयेत् पञ्चलवणं देयं सर्वन्तु तुल्यकं ।

गन्धकं मिश्रयेत् सर्वं रसैरेषां विभावयेत् ।

शुद्धौ-जयन्ती-विजया-महाराष्ट्रीक-धुन्तजैः ।

सर्वाङ्गसुन्दरोनाम्ना रसोयं विष्णुनिर्मितः ।

खादेदिरग्यशुण्ठीभ्यां माषमात्रं दिने दिने ॥

कफवातामयं हर्त्तुं चानुपानं वदाम्यहं ।

व्योषं सौवर्चलं हिङ्गुं करकबीजसंयुतं ।

पिवेदुष्णाम्बुना चानु सर्वरोगनिहन्तनं ॥

Reference :

1. In the Bower MS.,¹ Keśava or Viṣṇu is said to have asked Dhanvantari : Is there any medicine at all capable of curing all diseases ? In response to this query, Dhanvantari declared the Doctrine of the Plumbago-Plant.

2. The god Viṣṇu is recommended to be meditated when medicine is administered to a patient.² This practice is still in vogue among the orthodox Hindus.

¹ Bower MS., p. 169.

² श्रीवधे चिन्तयेद्विष्णुं ।

ŚIVA

In the Purāṇas, Śiva is considered to be the first propounder of the Science of Medicine. In later treatises, he is often quoted as an authority on medical subjects, and there exist, in these books, many formulæ which are said to have been prescribed by the god. A comprehensive work on medicine called Āyurgrantha or the Book of Life is ascribed to him, and he is said to have composed the work in the Tretā Yuga.

The name of Śiva, however, does not occur in the R̥gveda, but Rudra is mentioned by name there in connection with medical topics. Tryamvaka is mentioned there once. In the Yajurveda, prayers are offered to Rudra and Tryamvaka, and in this Veda, we find the different names of Rudra cited, amongst which Śiva occurs. He is specially called on to avert diseases and pestilences. He is prayed as the kindly god who cures disease, and from him Manu got wealth and health. From such a prototype comes the healing god Śiva in later literature.

We find Rudra invoked as the bestower of wealth and long life in the hymn by Gr̥tsamedā :

“Nursed by the sanitary vegetables which are bestowed by thee, may I live a hundred years : extirpate my enemies, my exceeding sin, and my manifold infirmities.”

* * * * *

“ Let us not provoke thee, Rudra, to wrath by our (imperfect) adorations.....invigorate our sons by the medicinal plants, for I hear that thou art a chief physician.”

And in subsequent verses Rudra is again solicited to give the gift of healing herbs and those medicaments which "are the alleviative (of disease) and defence against danger."¹

Now who is Rudra? In the *R̥gveda*, we find that sometimes Agni and Indra are called Rudra. In *R̥gveda*, i. 27, 10, (Sv., i. 15, and Nir., x. 7 and 8) we find : अराधय तद् * * * सोमं रुद्राय हवीकं । Yāska comments : Agni is also called Rudra.² Sāyaṇa also agrees with Yāska.³

His sisters were the Ambikās (Vaj. S. 3. 57, Yv. iii. 57). In the *Purāṇas*, Ambikā is described as the wife of Śiva. Roth (Illus. of Nir., p. 136) refers to Rv. v. 70, 2, and Rv. viii. 26, 5, where the epithet Rudra is applied in the dual to Mitra and Varuṇa and to the Aśvins respectively. Thus we find that the Aśvins, Agni, Mitra and Varuṇa are called Rudras. He is said to be the father of the Maruts.⁴ Pṛśni was their mother. (See Sāyaṇa's Commentary on Rv. i. 39, 4; i. 114, 6; Rv. v. 52, 16; 60, 5; vi. 66, 3.) Agni is called Rudra in Rv. ii. 1, 6, Thou art Asura Rudra, etc.⁵ (See also Rv. iii. 2, 5; v. 3, 3; iv., 3, 1, but in .v 6. Rudra is referred to as the name of another god; Commentary on Rv. vi. 16, 39; viii. 61, 3; S. B. i. 7, 3, 8 रुद्रोऽग्निरिति; 6, 1. 3, 7 ff.

We find in the *Yajurveda* that the various names of Rudra are described :—

Kṛibi (x. 20k.), Bhava, Rudra, Śarvva, Paśupati, Nilakaṇṭha, Sītikaṇṭha (xvi. 28), Kaparddī, Vyuptakeśa,

¹ Mrs. Manning. *Ancient and Mediæval India*, Vol. I, p. 337.

² अग्निरपि रुद्र उच्यते । Yāska.

³ त्वम् अग्ने रुद्रो असुरी etc. Sāyaṇa.

⁴ रुद्रासः रुद्रपुत्रा मरुतः । Sāyaṇa.

⁵ रुद्राय कूराय अग्रये । Sāyaṇa.

Sahasrākṣa, Śatadhanvā, Girisaya, Sipibiṣṭa, Mṛdhuṣṭama, Iṣumān (xvi. 29), Śaṅkara, Śiva, Śivatara (xvi. 41). Besides these, the other names of Rudra are mentioned.

Max Müller¹ identifies Bhava with the Greek sun-god Phœbus, according to phonetic laws. Weber² thinks the original meaning of Rudra to be thunder (Root. *Ruda* to shout).

His works :

1. *Āyurgrantha* : The Book of Life. Śiva is said to have written this work in the Tretā Yugā, as the first medical work, the original source of the medical science.

2. *Rudryāmala Tantra* : Śiva is said to have composed a comprehensive book called *Rudryāmala Tantra* in which he propounded the use of mercury as a therapeutic agent. Many books are extant which profess to be parts of this original treatise : viz.,

(i) *Pārada kalpa* : It forms a chapter of *Rudryāmala Tantra* and describes the preparations and medicinal uses of mercury.

(ii) *Dhātukalpa* : It forms a chapter of *Rudryāmala Tantra* and treats of the therapeutic uses of metallic substances.

(iii) *Haritālakalpa* : It forms a chapter of *Rudryāmala Tantra* and it describes the properties and medicinal uses of yellow orpiment.

(iv) *Abhrakalpa* : a treatise on the properties and medicinal uses of mica.

(v) *Haritakīkalpa* : It treats of the uses of myrobalan.

(vi) *Dhātukriyā* or operations with metals : It is in the shape of a dialogue between Śiva and Pārvatī. "The

¹ Max Müller : *Origin and Growth of Religion* (1882), p. 216.

² Weber : *Indische Studien*, translated in Muir's *Sanskrit Texts*, Vol. IV.

work cannot be placed earlier than in the sixteenth century A.D., as it contains reference to the country of the *Phirangas* and to Rûma, the Arabic name of Constantinople." ¹ The book is also called *Dhātumañjarī*.

3. *Kāma Tantra*: a treatise on the sexual science. A compilation from this book is called "*Mantratantra-uṣadhi*" which treats of the use of medicines prepared with the help of charms and incantations.

4. *Śaiva Siddhānta*: The work is mentioned and quoted by *Cakrapañidatta* with reference to *Śiva Guṭikā*.²

5. *Āyurveda*:

MS: GOML. (Madras), Vol. xxiii, No. 13086.

A treatise dealing with the symptoms, the diagnosis and the treatment of diseases. "The Science of *Āyurveda* is here stated to be an appendage of the *R̥gveda* and to have been revealed by God *Parama-śiva* to Goddess *Pārvatī*."

Beginning : कैलास शिखरे रत्ये पार्वती परमेश्वरी ।

अन्योन्यसुखलीलायां प्रमदादिमहागणे ॥

* * * *

* * * *

सर्वभूतहितं गोप्यं ऋग्वेदाङ्गं (वे)दरूपकम् ।

आयुर्वेदमिदं नाम सर्वजन्तु(न्तो)श्च जीवनम् ॥

End : चयप्रकोपप्रशमा वायोर्यौषादिषु त्रिषु ।

वर्षादिषु च पित्तस्य श्लेष्मणः शिशिरादिषु ॥

अथै पित्तगतिर्नाडी मध्ये सारुत जायते ।

अन्ये श्लेष्म च विज्ञेयं कोविदैः शास्त्रपारगैः ।

Colophon : इति व्याचिरूपं समाप्तम् ॥

¹ Ray, History of Hindu Chemistry, Vol. II, Ch. I, p. lxxx.

² शैवशिद्धान्तोक्ति शिवागुडिकेत्यम् ।

Cakradatta, Rasāyanādihikara, p. 366.

Ibid : MS. No. 13087. "Similar to the above. It is written in prose in the form of sūtras. The work appears to be the same as that described on p. 63 of Dr. Burnell's Catalogue."

MS. No. 1308. Similar to the above.

6. Kailāsakāraka : MS : GOML., Vol. xxiii, No. 13113.

"On the purification of mercury and on the method of using it in medicinal preparations. In the beginning the legendary account of the origin of mercury is given. The work is in the form of a conversation between Śiva and Pārvatī."

Beginning : रसाकाराय शर्वाय नमस्तत्त्वार्थकारिणे ।

जरामरणदारिद्र्यचव्याधिदुःखापहारिणे ॥

कैलासशिखरासीनं कान(म)कन्दर्पनाशनम् ।

प्रसन्नं परमेशानं जगदानन्दकारणम् ॥

End : पञ्चधैव कषायिन पूर्वपूर्ववलप्रदाः

* * * *

आलम्ब्य दधिकाशी च धीव्यं तद्वशिकल्पनात् ॥

Colophon : इति कैलासकारकः समाप्तः ॥

7. Vaidyārāja Tantra : MS : GOML., Vol. xxiii, No. 13226.

"This work is apparently a comprehensive medical treatise. The portion contained in this MS. gives details for feeling the pulse and is stated to have been revealed by Parama-śiva to Pārvatī."

Beginning : कैलासशिखरे रम्ये नानारत्नविभूषिते ।

नानाकल्पद्रुमाकीर्णे गुल्फसम्भाषवर्जिते ॥

End : पूर्वं पीथ (पित्त) गति प्रभञ्जनगतिस्त्रे ध्यानमाभिप्र(विध)तौ—

सत्यन्तभमणी सुहृविदधर्तौ चक्राधिरुद्राजि(ध)वा ।

मीमल दधतीं कलापरहितं सर्वे गतिं चायूतां

नो साध्यं धमनीं वदन्ति सुधियो नाडीगतं शनिनः ॥

Colophon : इति श्रीवावेतीसंवादे वैद्यराजतन्त्रे नाडीज्ञानं प्रथमकारणं सम्पूर्णम् ॥

References to Rudra as a physician in the Vedas :—

- Rv. i. 43. 2 : Rudra's medicines.
 4 : Rudra, the possessor of healing remedies. Prayer for health and wealth.
- 114, 1 (Vaj. S.
 16,48 ; Taitt. S.
 iv. 5,10,1) : Prayer to Rudra for men and beasts to be prosperous and free from disease.
- 2 : Prayer to obtain what health and wealth father Manu acquired.
- 5 : Rudra carries in his hands the best remedies.
- 7 : Prayer not to kill the old men, boys, fathers, mothers, adults, fetus, and our bodies.
- 8 : Prayer not to kill our sons, grandsons and men, cows and horses.
- ii. 33. 1 : May we increase in offspring, O Rudra.
- 2 : Prayer for 100 years of life by Rudra's blissful medicines. Put away far from us sickness in all directions.

- 4 : Raise up our men by thy medicines, for I hear thou art the greatest physician of physicians.
- 7 : O Rudra, where is thy softly stroking hand which cures and relieves?
- 6 : Prayer to gain the favour of Rudra who has gladdened the suppliant with more vigorous health.
- 12 : Thou wilt give us thy medicines.
- 13 : The pure medicines of Maruts, those medicines which Manu, our father, chose, those I crave from Rudra, as health and wealth.
- v. 42, 11 : Rudra commands all remedies.
- vi. 74, 2 : Prayer to Soma and Rudra to drive away diseases in every direction; and to infuse the remedies into our bodies.
- 4
- vii. 46. (Nir. x. 6),
- 2 : Prayer to Rudra to come without illness among our offspring.
- 3 : He has thousand remedies.
- 59 : Tryamvaka is mentioned.
- Yv. iii. Kaṇḍikās 57 : Tryamvaka is mentioned.
Ambikā is Rudra's sister.
- „ 58 : Rudra is called Tryamvaka.
- „ 59 : O Rudra, you are the best medicines. Prayer for Rudra's

- medicines for men and animals.
- Yv. iii. Kaṇḍikās 60 : Prayer to Tryambaka to be free from birth and death.
- „ 61 : Śiva by name is mentioned. O
- „ 1-16 Rudra! live within our body and protect it.
- xvi. Śatarūdriya
 (Rv. i., 114,1 ff)
 (Taitt. S. iv.5,) Prayer to Giriśa for good health (4) and for a first class physician, well-versed in the Vedas (5). He is prayed for not to kill foetus, boys and adults (15) and also for long life (16).
- „ 47—49 : Prayer to Śiva for recovery from diseases.
- Av. : xi. 2, 22 : Reverence to him whose consumption, whose cough, assail one like the neighing of a stallion.
- 26 : Do not assail us with consumption or poison.

References to Rudra in the R̥gveda—

- Rv. i, 27, 10 (Sv. i, 15; Nir. x. 8) : Rudra identified with Agni.
- 39 : Maruts, the sons of Rudra.
- 43 : See page 33.
- 64, 2 } : Maruts, the manly youths of
 3 } Rudra.
- 85, 1 : Maruts, the powerful sons of Rudra.

- 114, 1
(Vaj. S. 16, 48 ;
Tatt. S. iv, 5, 10,
1.) : Kaparddi is mentioned. Also
see page 33.
- 122, 1. : Asura Rudra.
129, 3. : The renowned Rudra.
- ii, 1, 6 : Agni, thou art Rudra, the
Asura of the sky.
- 33, 1—15 : Hymn by Gr̥tsameda.
34, 2 : Rudra, the strong man.
38, 9 : Rudra is mentioned.
- iii, 2, 5 : Agni is called Rudra.
- iv, 3, 1 : Golden Rudra Agni.
6 : Rudra, the destroyer of man.
- v. 3, 3 : Prayer to Agni who is invoked
as Rudra.
- 41, 2 : Rudra is mentioned.
42, 11 : Rudra, the lord of all medicines.
15 : Maruts, the young sons of
Rudra.
- 46, 2, (V. S.
33, 48) : Rudra is mentioned.
- 51, 13 : Prayer to Rudra to save us.
52, 16 : Pr̥sni, the mother, and Rudra
the father of the Maruts.
- 59, 8 : Rudra's son.
60, 5 : Rudra and Pr̥sni the parents
of Maruts.
- 70, 2 : Mitra and Varuṇa invoked as
Rudras.
- vi, 28, 7
(Av. iv, 21. 7) : Rudra's weapon.
49, 10 : Rudra, the lord of the world.

- 50, 4 : Rudra's sons.
- 66, 3 : Sons of the bounteous Rudra.
- 11 : Strong and Marut-like son of Rudra.
- 74, 2 : O Soma and Rudra, draw far away in every direction the disease which has entered our house.
- 3 : O Soma and Rudra, bestow all these remedies on our bodies.
- vii, 10, 4 : Great Rudra.
- 35, 6 : May Rudra god be peaceful to us.
- 36, 5 : Rudra is bestowing rice.
- 40, 5 : Rudra bestows glory.
- 41, 1, (V.S. 34, 34 ; Av. 3, 16, 1) : We pray Soma and Rudra in the morning.
- 46, 2 : Be without illness among our people, O Rudra.
- 3 : A thousand medicines are thine.
- 56, 1 : Boys of Rudra.
- 22 (V. S. 1, 433) : Sons of Rudra.
- 58, 5 : Sons of Rudra.
- 59, 12 : Prayer to Tryambaka to be detached from death, like a gourd from its stem.
- viii, 13, 20 : Maruts, the sons of Rudra.
- 20, 3 : Sons of Rudra.
- 17 : Rudra's sons, the lords of Asuras.
- 22, 14 : The Aśvin twins are invoked as two Rudras.

- 26, 5 : O Asvins ! you are Rudra.
 29, 5 : Rudra, the pure, the terrible,
 the pleasant, and the
 possessor of medicines,
 carries sharp weapons.
 x, 64, 8 : Rudra and the Great Rudra
 among the Rudras.
 65, 1 : Rudra is mentioned.
 66, 3 : May Rudra with his sons make
 us happy.
 93, 4 : When Rudra is prayed, men
 become happy.
 7 : Vāyus, sons of Rudra.
 125, 6 (Av. 4,
 30, 5) : Rudra kills his enemies.
 169, 1 : Prayer to Rudra to protect the
 cows.

In the R̥gveda, medicines are described to be generally brought by Rudra, and by his sons, the Maruts. The following hymns refer to Maruts in connection with medicine :

- Rv. ii. 33, 13 : O Maruts, those pure medicines
 of yours.
 v. 53, 14 : You shower down health, wealth,
 water and medicine, O
 Maruts !
 viii. 20, 23 : O bounteous Maruts, bring us
 some of your Marut-medi-
 cines.
 25 : Whatever medicine there is
 on the Sindhu, on the
 Asikni, in the seas, on the
 mountains ;

26 : Seeing it, you carry all on your bodies. Bless us with it! Down to the earth, O Maruts, what hurts our sick one,—straighten what is crooked.

x. 77, 7 : The man who offers gifts to the Maruts, gains health and wealth, blessed with offspring.

The formulæ ascribed to Śiva :—

Formulæ.	Authors.	Books.	Page.
1. Cintāmaṇi Rasa	Bhairava	R. S. S.	125
2. Sūcikābharaṇa Rasa	Bhairava	"	137
3. Mṛtasañjivana Rasa	Śaṅkara	"	139
4. Ardhanaṛiśvara Rasa	Śambhu	"	151
5. Sarvatobhadra Rasa	Śiva	"	168
6. Cūḍāmaṇi Rasa	"	"	171
7. Vṛhat Cūḍāmaṇi Rasa	"	"	172
8. Grahaniśśraddhā Rasa	"	"	194
9. Vaidyanātha Vaṭi	Vaidyanātha	"	195
10. Rājavallabha Rasa	Maheśa	"	210
11. Mahārāja Nṛpatiballabha } Sarvatobhadra }	Maheśvara	"	213
12. Mahārāja Nṛpavallabha	Śambhu	"	214
13. Pañcānana Vaṭi	Śaṅkara	"	221
14. Vṛhat Agni Kumār Rasa	Maheśa	"	224
15. Lokeśvara Rasa	Śambhu	{ R. C. IX	267 97
16. Catūrbhūja Rasa	Maheśa	"	307
17. Śūtabhasma Prayoga	Mahādeva	"	309
18. Viśveśvara Rasa	Viśvanātha	"	338
19. Āmaravātāri Vaṭikā	Pureśana	"	341
20. Sūlarāja Lauha	Hara	"	348
21. Vaidyanātha Vaṭi	Vaidyanātha	"	356
22. Jogēśvara Rasa	Mahādeva	"	401
23. Mahā Mṛtyunijaya Rasa	Maheśa	"	381
24. Vajrakṣāra	Pināki	"	403

Formulæ.	Authors.	Books.	Page.
25. Candrānana Rasa	Bhairava	{ R. C., IX	417
		"	122
26. Vālarasa	Śiva	"	465
27. Śrī Manmatha Rasa	Maheśa	"	469
28. Vasantatilaka Rasa	Mṛtyuñjaya	"	480
29. Makaradhvaja	Śiva	"	480
30. Mahā Nīlakaṭṭha Rasa	Śambhu	"	482
31. Jāraṇa and Bhakṣaṇa of Mica and Mercury	Iśvara } Bhairava }	R. C.	11 12
32. Cūrparāja	Rudra	"	51
33. Candraprabhā Guṭikā	Śambhu	"	86
34. Rasaśārdūla	Giriśa	"	48
35. Śrī Kāmeśvara Modaka	Vaidyanātha	"	61
36. Śiva Gutikā	Śiva	Śaiva Siddh- vānta, C.D.	366
37. Kravyāda Rasa	Bhairava	"	86
38. Śaṅkara Lauha	Śaṅkara	B. P. II. ii.	292
39. Candraprabhā Vaṭī	Rudra	" II. ii.	623
40. Mahā Bhallātaka Avaleha	Mahādeva	" II. iv.	884
41. Rasāilā	Makareśvara	" III.	1179
42. Siṁhanāda Guggulu	Daṇḍapāṇi	C. D.	157
43. Formula to Cure Svitra	Vaidyanātha	"	25
44. Kusumāḍya Taila	Devadeva	G. N., Vol. I.	46
45. Vṛhat Śiva Guṭikā	Giriśa	"	124
46. Vyosāḍya Guṭikā	{ Śambhu { Kālapāda	" "	129
47. Vṛhat Śāyambhuva Guggulu	"	"	135
48. Kumāryāsava	Sūlapāṇi	"	165
49. Nālikerāsava	Śambhu	"	189
50. Vṛhat Sahacara Taila	"	"	209
51. Vijayā Guṭikā	Rudra	"	232
52. Kaulītikā Vartī	Pināki	" Vol. II	454
53. Śūtabhasma	Śiva	R. P. S. III	30
54. Gandhaka Taila Pātana	Śambhu	" VI	58
55. Vātanāśana Rasa	Bhairava	" VIII	83
56. Tālakarāja Rasa	Bhairava	" "	97
57. Svarṇa Sindūra	Pināki	Samkṣipta Sāra	3
58. Pūrṇacandra Rasa	Śaṅkara	"	4
59. Bhasmeśvara	Śambhu	Vaidya Joga Saṅgraha GOML, 13225	

Formulae.	Authors.	Books.	Page.
60. Śītabhañjī Rasa	Rudra	Rasasañketa kalikā	15
61. Putraprada Rasa	"	"	24
62. Sarvāvyādhihara	"	Rasasañra	82

1. CINTĀMAṆI RASA.

चिन्तामणिरसः ।

रसविषगन्धकटङ्गणतामयवचारकं व्योषं ।
 तालकफलवयं च चौद्रेः शतं वारान् ।
 समर्द्धं रक्तिमितवटिका काव्या भिषग्भिः प्राञ्चैः ।
 शुण्ठीपिष्टेन सममेकां ह वाधवा तिस्रः संप्राश्य ।
 नारिकेलजलमनुपेयं सिचयेत्
 सैन्धवं जीरं तक्रपथं प्रयोक्तव्यं ।
 प्रशमयति सन्निपातज्वरं
 तथा जीर्णज्वरं विविधञ्च ॥
 ग्रीहानं चाधानकं कासं श्वासं वज्रिमान्द्यञ्च ।
चिन्तामणिरसोऽयं किल स्वयं भैरवेण निर्दिष्टः ॥

2. SUCIKĀBHARAṆA RASA.

सूचिकाभरणोरसः ।

रसगन्धकनागञ्च विषं स्थावरजङ्गमं ।
 मातृस्ववाराहमायुरक्षागपिचैर्विभावयेत् ।
 सूचिकाभरणो नाम भैरवेण प्रकीर्तितः ।
सूचिकायेण दातव्यः सन्निपातनिवर्हणः ॥

3. MṚTASĀNĪBANA RASA.

मृतसञ्जीवनीरसः ।

शुद्धमृतं विधा गन्धं खल्ले तत् कञ्जलीकृतं ।

अधलौहकयोर्भक्ष्यताम्बुसमं समं ।

विषं तालं वराटश्च शिलाहिङ्गुलचिवकान् ।

हस्तिशृङ्गी चातिविषा तूपर्णं हंसमाक्षिकं ।

चूर्णं विमर्दयेद्वावैराट्रकस्य दिनवयं ।

निर्गुण्डीविजयाद्रावैस्त्रिदिनं मर्दयेत् पुनः ।

काचकुण्यां निवेश्याथ वालुकायन्त्रगे पचेत् ।

द्वियामाने समुत्प्लव्य मर्दयेदाद्रकैर्द्रवैः ।

मृतसञ्जीवनी नाम रसोऽयं शङ्करोदितः ।

मृतोऽपि सन्निपातार्त्तो जीवत्येव न संशयः ॥

4. ARDHANĀRĪŚVARA RASA.

अर्धनारीश्वरीरसः ।

रसगन्धौ समौ शुद्धौ विषं याष्ट्यश्च तत्समं ।

जैपालं तत्समं याष्ट्य' मरिचश्च चतुर्गुणं ।

विफलाया रसैर्नर्दं भावना पञ्चधा तया ।

जम्बीराणां द्रवैर्नैल्यमेकक्षिन्नासिकापुटे ।

शरीरार्द्धगतं घोरं ज्वरं हन्ति न संशयः ।

अर्धनारीश्वरी नाम रसः शम्भुप्रकीर्तितः ॥

5. SARVVATOBHADRA RASA.

सर्वतोभद्ररसः ।

विशुद्धं गगनं याष्ट्य' विकर्षं शुद्धगन्धकं ।

तोलकं तोलकाईश्च हिङ्गुलीत्यरसन्नाथा ।

कर्पूरं केशरं मांसी तेजपत्रं लवङ्गकं ।

जातीकीषफलश्चैव सूक्ष्मला करिपिप्पली ।

कुष्ठं तालीशपत्रञ्च धातकीचीचसुस्तकं ।
 हरीतकी मरिचघण्टवैर विभीतकं ।
 पिप्पल्यामलकञ्चैव शाणभागं विचूर्णितं ।
 सर्वमेकीकृतं पिष्ट्वा वटीं कुर्याद्विगुम्भिकां ।
 भक्षयेत् पण्डुरेण मधुना सितयापि वा ।
 रोगं ज्ञात्वानुपानञ्च प्रातः कुर्याद्विचक्षणः ।
 हन्ति मन्दानलान् सर्वान् आमदीप्यं विमृचिकां ।
 पित्तञ्चैव भवं रोगं वातञ्चैव भवन्तथा ।
 आनाहं मूषकृच्छसंयद्गृह्णीं वसिं ।
 अक्षपित्तं शीतपित्तं रक्तपित्तं विशेषतः ।
 चिरज्वरं पित्तभवं धातुस्थं विषमज्वरं ।
 कासं पञ्चविधं हन्ति कामलां पाण्डुमेव च ।
 सर्वलोकहितार्थाय शिवेन भाषितः पुरा ।
 सर्वतोभद्रनामायं रसः साक्षात्तद्वैरः ॥

6. CŪḌĀMAṆI RASA.

चूडामणिरसः ।

मृतं मृतं प्रवालञ्च स्वर्णं तारञ्च वङ्गकं ।
 शुक्लं मुक्ता तीक्ष्णमभं सर्वमेकैव योजयेत् ।
 जलेन पिष्ट्वा वटिका कार्या वज्रप्रमाणतः ।
 धातुस्थं सन्निपातोत्थं ज्वरं विषमसम्भवं ।
 कामशीकसमुद्भूतं विदोषजनितन्तथा ।
 कासं त्रासञ्च विविधं गुलं सर्वार्द्रसम्भवं ।
 शिरीरोगं कर्णगुलं दन्तगुलं गलगर्हं ।
 वातपित्तसमुद्भूतं गृह्णीं सर्वसम्भवां ।
 आमवातं कटीगुलमग्निमान्द्यं विमृचिकां ।
 अर्शंसि कामलां मेहं मूषकृच्छादिकञ्च यत् ।
 तत्सर्वं नाशयत्यायुः विष्णुचक्रमिवामुरान् ।
 चूडामणिरसो ह्येष शिवेन परिकीर्तितः ॥

7. VRHAT CŪḌĀMAṆI RASA.

वृहच्चूडामणिरसः ।

कसूरिकाविट्मरौप्यलीहं

तालं हिरण्यं रससिन्दूरश्च ।

सुवर्णं सिन्दूरलवङ्गमौक्तिकं चोचं

धनं मालिकं राजपट्टं ।

गोशुरजातीफलजातीकोषं

मरिचकपूर्वशिशिविषं ।

प्रगृह्य सर्वं हि समं प्रयत्नात्

अथाश्वगन्ध्वा दिगुणं हि वेद्यः ।

वत्समाणीषधैर्भाव्यं प्रत्येकं मुनिसंख्यया ।

निर्गुणौषधिकावासारविमूलचिकण्टकैः ।

तद्वीथ्यै कथयिष्यामि वातिकं पैत्तिकं ज्वरं ।

कफोद्भवं हिदोषोत्थं चिदोषजनितस्तथा ।

सन्ततं सततं हन्ति तृतीयकचतुर्थकौ ।

ऐकाहिकं द्वाहिकञ्चविषमं भूतसम्भवं ।

नाशयेदचिरादेव वृक्षमिन्द्राशनिर्यथा ।

चूडामणिरसो ह्येष शिवेन परिभाषितः ॥

8. GRAHAṆĪŚĀRDDULA RASA.

ग्रहणीशार्दूलरसः ।

रसगन्धकयोद्यापि कर्षमेकं सुशोधितं ।

द्वयोः कज्जलिकां कृत्वा ह्नाटकं षोडशंशतः ।

लवङ्गं निम्बपत्रञ्च जातीकोषफले तथा ।

एतेषां कर्षचूर्णेन सूक्ष्मां सह मेलयेत् ।

मुक्तागृहेन संख्याप्य पुटपाकेन साधयेत् ।

गुग्गापञ्चप्रमाणेन प्रत्यहं भक्षयेन्नरः ।

सूतिकां ग्रहणीरोगं हरत्येष सुनिश्चितः ।

अशङ्को दीपनयैव बलपुष्टिप्रसादनः ।
 कासन्नासातिसारघ्नो बलवीर्यकरः परः ।
 दुर्वारं ग्रहणीरोगक्षामशूलञ्च नाशयेत् ।
 संसारलोकरचार्यं पुरा रुद्रेण भाषितः ॥

9 VAIDYANĀTHA VATĪ.

वैद्यनाथवटो ।

रसस्य शाणं संगृह्य काञ्चिकेन तु शोधयेत्
 चित्रकस्य रसेनापि त्रिफलायाश्च बुद्धिमान् ।
 रसाहं गन्धकं शुद्धं भङ्गराज्रसेन वा ।
 द्वाभ्यां संसृज्ज्वलं कृत्वा स्वरसैः शाणसन्मितैः ।
 खल्लयेत्त शिलाखण्डे क्रमशो वक्ष्यमाणजैः ।
 निर्गुण्डीमधुकश्रेताकुठेर शीघ्रमुन्दरैः ।
 भङ्गाद्वकेशराजैश्च तथा चन्द्राग्रनोत्कटैः ।
 सर्वपाभां वटैर् कृत्वा दद्यात्तां ग्रहणीगदं ।
 सामवातेऽग्निमान्द्रे च ज्वरे ग्रीहीदरेषु च ।
 वातस्त्रैष्विकारिषु तथा ह्येभ्योऽपि च ।
 अस्त्रतक्रादिसिवाच्च कुर्वीत स्नेह्यया बहु ।
 शोमता वैद्यनाथेन लोकानुग्रहकारिणा ।
 स्वप्रान्त ब्राह्मणस्थेयं भाषिता लिखितेन तु ॥

10. NṚPAVALLABHA RAS

नृपवल्लभो रसः ।

जातीफल-लवङ्गाद-त्वगीला-टङ्गरामठं ।
 जीरकं तेलपत्रञ्च यमानी विश्वसैन्धवं ।
 लौहमन्त्रं संतामस्य रसगन्धकमैत्रं च ।
 मरिचं विहतं रुष्यं प्रत्येकं द्विपलौघ्नितं ।
 धात्रीरसे वटैर् कुर्यात् द्विगुञ्जाफलमानतः ।
 हन्ति शूलं तथा गुल्ममामवातं सुदारुणं ।

हृच्छूलं पार्श्वशूलञ्च चक्षुःशूलं हृत्सीमकं ।
 शिरःशूलं कटीशूलमानाहमष्टशूलकं ।
 क्रिमि-कुष्ठानि-दद्रूनि वातरक्तं भगन्दरं ।
 उपदंशमतीसारं यक्ष्ण्यर्शःप्रवाहिकां ।
 नृपवल्गभरसीयं मक्षिणैः प्रकाशितः ॥

11. MAHARAJA NRPATIVALLABHA RASA.

महाराजशृपतिवल्गभरसः ।

कर्पवयं शृतं कान्तं शृताम्बुं शृतताम्रकं ।
 शृतं तारं माक्षिकञ्च कर्षं कर्षं प्रदापयेत् ।
 शृतं स्वर्णं शृतं तारं टङ्गणं शृङ्गमेव च ।
 वसिरं दन्तिमूलञ्च मरिचं तेजपत्रकं ।
 यमानी वालकं सुप्तं शुण्डकञ्च सधान्यकं ।
 सिन्धुद्वयं सकर्पूरं विडङ्गं चितकं विषं ।
 पारदं गन्धकञ्चैव तोलमीनं प्रदापयेत् ।
 तोलद्वयं त्रिहृद्वयं खवङ्गं तच्चतुर्गुणं ।
 जातीकीषफलञ्चैव वराङ्गकान्तु तत्समं ।
 सर्व्वेषामर्शभागान्तु विडङ्गं तत्र मिश्रयेत् ।
 सर्व्वमीकीकृतं यद्वयत् तृटिचूर्णञ्च तत्समं ।
 भावना च प्रदातव्या काशीदुग्धेन समधा ।
 मातुलुङ्गरसैः पञ्चात् भावयेत् समवारकं ।
 छायाशुष्कां वटीं कृत्वा भक्षयेद्दशरत्निकां ।

सन्दानलं संगृह्णीं प्रहृष्टा-
 मामानुबन्धीं क्रिमिपाण्डुरोगं ।
 कृष्णस्त्रपित्तं हृदयामयञ्च
 गृच्छीदरानाहभगन्दरञ्च ।
 अर्शोसि वै पित्तकृतानशेषान्
 सामं सश्लाटकमेव हन्ति ।
 साजीव्यं विटम्ब-विसर्पदाहं

विलम्बिकाद्याम्बलसं प्रमेष्टं ।
 कुष्ठान्यशेषाणि च कासशोथं
 हन्यात् सशोथं ज्वरमृदुतच्छ्रं ॥
 मतान्तरे सर्व्वतोभद्रनाम
महेश्वरेणैव विभाषितोऽयं ॥

12. MAHĀRĀJA NṚPAVALLABHA.

महाराजपुत्रवत्सलः ।

माषिकं लौहमधश्च वङ्गं रजतहाटकं ।
 यन्मि यमानिका चोचं तास्यं नागरटङ्गणं ।
 सैन्धवं बालकं सुप्तं धान्यकं गन्धकं रसं ।
 शङ्खी कर्पूरकश्चैव प्रत्येकं माषकोन्मितं ।
 माषद्वयं रामठं स्थान्मरिचानां चतुष्टयं ।
 जातीकोषं लवङ्गश्च पदश्च तोलकोन्मितं ।
 नाभिश्ङ्खं विङ्गङ्गश्च शण्यं माषद्वयं विषं ।
 कर्षण्टकं सविमाथं सूक्ष्मलानां ततः क्षिपेत् ।
 विषं कर्षण्डयं सर्व्वं छागीचीरेण पेषयेत् ।
 चतुर्गुणमितं खादेत् सानाह्यहर्षी जयेत् ।
शङ्भुना निर्मितो ह्येष पूर्व्ववद् गुणकारकः ।
 नाथ महाराजपुत्रो नृपवत्सल उच्यते ॥

13. PAÑCĀNANA VĀTĪ.

पञ्चानन वटी ।

सृतसृताभलीहानि सृताकगन्धकैः सह ।
 सन्ध्याणि समभागानि भङ्गातं सर्व्वतुल्यकं ।
 वन्यशरणकन्दोत्थैर्द्रवैः पलप्रमाणतः ।
 मर्दयेद्दिनमेकञ्च माषमात्रं पिबेद्दृष्टेः ।
 असाध्येष्वपि कर्त्तव्या चिकित्सा शङ्खरोदिता ।
 कुष्ठरोगं निहन्त्यायुः सत्युरोगविनाशिनौ ॥

14. VRHAT AGNI KUMĀRA RASA.

वृहदग्निकुमारो रसः ।

ग्रहसूतं विधा गर्भं गन्धतुल्यञ्च टङ्गणं ।
 फलवयं ययचारं व्योषं पञ्चपटूनि च ।
 द्वादशैतानि सर्व्वणि रसतुल्यानि दापयेत् ।
 संमर्द्दं सप्तधा सर्व्वं भावयेदाद्रकद्रवैः ।
 संशोष्य चूर्णयित्वा तु भजयेदाद्रकाम्बुना ।
 शाणमात्रं वयो वीक्ष्य नानाजीर्णप्रशानये ।
 रसश्चाग्निकुमारोयं महेशेन प्रकाशितः ।
 महाग्निकारकश्चैव कालभास्करतेजसां ।
 अग्निमान्दभवानुगान् शीथं पाण्डुमयं जयेत् ।
 दुर्नामग्रहणीसामरोगान् हन्ति न संशयः ।
 शिष्टाहारचेष्टस्य नास्ति नियमः क्वचित् ॥

15. LOKEŚVARA RASA.

लोकेश्वरोरसः ।

पलं कपर्दचूर्णस्य पलं पारदगन्धयोः ।
 माषञ्च टङ्गणसैव जम्बीराद्विस्मिद्वैद्यैः ।
 पुटेष्ठीकेश्वरोनाम्ना लोकनाथरसोत्तमः ।
 ऋते कुष्ठं रक्तपित्तजन्मान् रोगान् वलादजयेत् ।
 पुष्टी वीर्य्यं प्रसादीजः कान्तिलावण्यदः परः ।
 कोऽस्ति लोकेश्वरादन्यो नृणां शम्भुसुखोद्भूतः ।
 पथ्यं शाल्योदनं सर्पिर्दंशिशाकं सङ्गिहृत्कं ।
 नित्यं यामहयाद्भुवं कार्य्यं वारतयं दिवा ।
 चाहान्तिऽरुचिवान्ते वा लघ्नः सूतो न चेत् पुनः ।
 अष्टमीर्नि प्रदातव्यः पूर्व्ववत् कार्य्यसिद्धये ।
 प्रथमे सप्तमे देया लावण्यसुदृकाः ।
 द्वितीये माषगोधूमं भक्ष्यं पूर्व्वोदितञ्च यत् ।

दीयानि मत्स्यमांसानि तृतीयै मर्द्दनादिकं ।
 तैलविन्दारणालानि कोपस्त्रीस्त्रप्रजागरान् ।
 त्वजेत् कादीनि द्रव्याणि ह्रद्यं स्वादु च शीलयेत् ।
 वायी सेव्यं पयः कोणं पित्ते तु ससितं हितं ।
 अत्यग्री चोरवीजानि तिलेचुकदलीफलं ।
 खर्जूरमांसमृडिकासितादिसकलं भजेत् ।
 वीर्यचूतौ नारिकेलजलं तालफलानि च ।
 आनाहारुचिमूर्च्छांर्षिधूमोद्धारविसृचिकाः ।
 एतेषु लघु शाक्यग्रं केवलं सघृतं हितं ।
 अतिशान्तिं पिवेच्छिन्नारसं क्षीट्रेण संयुतं ।
 सजीर्णं वासकं रक्तपित्ते रुचिविपर्यये ।
 भट्टधान्यं सितायुक्तमथवाचौद्रसंयुतं ।
 यवाग्रं मधुसंयुक्तं पिवेद्वा महर्षिं दधि ।
 यवाग्रं भक्षयेन्नित्यं सुखीणेन च वारिणा ।
 क्षिप्रान्मुसहितं देयं दाष्टे जीर्णे सुधाजलं ।
 चार्द्रकं सर्षपं रम्भाफलं भृङ्गं कफीलने ।
 अन्येऽप्युपद्रवा ये स्युस्तस्यैकान्यै ययीषधं ।
 हाविंश्चिद्विषे कार्प्यं खानमामलकैस्तिलैः ।
 युक्तं सेव्यं वले जाति शनैरग्नियलादनु ॥

16. CATURBHUJA RASA.

चतुर्भुजरसः ।

सतसुदस्य भागौ द्वौ भागैकं हेमभक्तकं ।
 शिला कसूरिका तालं प्रत्येकं हेमतुल्यकं ।
 सर्वं खल्लतले चिघा कन्धया मर्द्दयेद्दिनं ।
 एरुष्यपदैरावेष्टा धान्यगर्भे दिनवयं ।
 संस्थाप्य च तदुद्भूत्य सर्वं रोगेषु योजयेत् ।
 एतद्रसायनवरन्निफलामधुमर्द्दितं ।
 तद् यथाग्निबलं खादित्वलौपलितनाशनं ।

पसारि ज्वरे कासि शोथे मन्दानले चये ।
 हसकम्पे शिरःकम्पे गातकम्पे विशिषतः ।
 वातपित्तसमुत्थांश्च कफजान् नाशयेद्भुवं ।
 सर्वाधिधि प्रयोगैरेव व्याधयो न प्रसाधिताः ।
 कर्माभिः पञ्चभिरेव मन्त्राधिधि प्रयोगतः ।
 सर्वास्त्रान् नाशयन्नायु हचमिन्द्राशनिर्यथा ।
ततुर्भुजरसी नाम महेष्टेन प्रकाशितः ॥

17. SŪTABHASMA PRAYOGA.

सूतभस्मप्रयोगः ।

शङ्खपृष्ठी वचा ब्राह्मी कुष्ठमेला रसेः सह ।
सूतभस्मप्रयोगोऽयं रक्तिकादयमानतः ।
 सर्वापक्वरनाशाय महादेवेन भाषितः ॥

18. VIŚVEŚVARA RASA.

विश्वेश्वरोरसः ।

रसाद्दश विषात् पञ्च गन्धकाद्दश शोधितात् ।
 तुल्याद्दश पलाशस्य बीजैश्च पञ्च कारयेत् ।
 षुद्राश्वमार-धूसूर-करहाटक मौलीतः ।
 दशकं दशकं कुर्याच्छोधयित्वा जटालचः ।
 दशकं दशकं दत्त्वा कुचिलाद्दश नूतनात् ।
 भङ्गातकाच्च दशकं चूर्णयित्वा भिषक् ततः ।
 सुदिग्धसे वलिं दत्त्वा वैद्यः पूजापरायणः ।
 रक्तिका द्वितयं दद्यात् सहते यदि वा चयं
 वातरक्तं ज्वरं कुष्ठं खरस्पर्शमसौख्यदं ।
 आजानुसूठितं हन्ति विषजं वास्थानः स्रुतं ।
 कुष्ठमष्टादशविधमग्निमान्दमरोचकं ।
विश्वेश्वरो रसो नाम विश्वनाथेन भाषितः ॥

वत्स्यते कुष्ठरोगे यदीषधं भिषजां वरैः ।
वातरोगे प्रयुञ्जीत कुर्याच्च रक्तमोक्षणं ॥

19. ĀMAVĀTĀRI VATIKĀ.

आमवातारि वटिका ।

रसगन्धकलीहामं तुल्यं टङ्गणसैन्धवं ।
समभागं विचूर्ण्याथ चूर्णोद्भिगुणगुग्गुलुः ।
गुग्गुलीः पादिकं देयं चिह्नामूलवल्कलं ।
तत् समं चिवकं देयं हृतेन परिमह्येत् ।
खादेन्माषहयश्चास्य विफलाचूर्णयोगतः ।
आमवातारि वटिका पाचिका भेदिका मता ।
आमवातं निहन्त्याय गुल्मशूलोदराणि च ।
यक्ष्मशूलोदराष्टौला-कामलापाण्डूरोचकान् ।
ग्रन्थिशूलं शिरःशूलं वातरोगञ्च गृध्रसर्पं ।
गलगण्डं गण्डमालां क्रिमिकुष्ठभगन्दरान् ।
विद्रधिमन्त्रहृदिञ्च अर्शोऽपि गुदजानि च ।
आमवातारि वटिका पुरिषानेन बोदिता ॥

20. ŚŪLARĀJA LAUHA.

शूलराजलीहम् ।

कर्पूरं कान्तलीहस्य गुह्यमभं पलन्तथा ।
सितायाय पलचेकं सधुसर्पिलथैव च ।
सञ्जमेकौकृतं पात्रे लीहदृष्टेण सह्येत् ।
विकटुं विफलामुखां विङ्कजं च व्यञ्चितकं ।
प्रत्येकं तोलकं मानं चूर्णितं तत्र दापयेत् ।
भक्षयेत् प्रातरुत्थाय शिशिराम्बुपानतः ।
सर्वं दोषभवं शूलं कुचिशूलञ्च यत्भवेत् ।
हृक्कलं पार्श्वशूलञ्च अस्त्रपित्तञ्च नाशयेत् ।

अशांसि यद्वशीदीपं प्रमिहंश्च विसृचिकां ।
शूलरात्रमिदं लौहं हरेन परिनिर्मितं ॥

21. VAIDYANĀTHA VATI.

वैद्यनाथवटी ।

पथ्या विकटं सूतञ्च दिगुणं कानकलया ।
 धानकुनीरसैरखलोलिकायारसेः कृता ।
 गुडिकोद्वरगुल्मादिपाण्ड्यामयविनाशिनी ।
 क्रिमि-कुष्ठ-गात्रकण्डू पीडकांश्च निहन्ति च ।
 गुह्यौ सिद्धफला चेयं वैद्यनाथेन भाषिता ॥

22. JOGĒŚVARA RASA.

योगेश्वरीरसः ।

सूतकं गन्धकं लौहं नामचापि वराटिकां ।
 ताम्रकं बहुभस्मापि व्योमकञ्च समाश्रितं ।
 सूक्ष्मापवसुसाञ्च विडङ्गं नागकेशरं ।
 रेणुकामलकञ्चैव पिप्पलीमूलमेव च ।
 एषाञ्च दिगुणं भागं मर्दयित्वा प्रयत्नतः ।
 भावना तत्र दातव्या धात्रीफलरसेन च ।
 मावा चणकतुल्या च गुडिकेयं प्रकौर्त्तिता ।
 प्रमिहं बहुमूलञ्च अश्वरीं मूलकञ्चकं ।
 त्रणं हन्ति महाकुष्ठमशांसि च भगन्दरं ।
योगेश्वरीरसीनाम् महादेवेन भाषितः ॥

23. MAHĀ MṚTYUNJAYA RASA.

महामृत्युञ्जयीरसः ।

रसगन्धकलीहासं कुनटीतुल्यताम्रकं ।
 सैन्धवञ्च वराटञ्च वागुजौ विडङ्गञ्चकं ।

चित्तकं हिङ्गुकटुकौ विचारं कटफलमथा ।
 रसाञ्जनं जयन्ती च टङ्गणं समभागिकं ।
 एतत्सर्वं विचूष्याथ दिनमिकं विभावयेत् ।
 आर्द्रकस्वरसेनैव गुडूच्याःस्वरसेन च ।
 गुञ्जामायां वटीं कृत्वा भक्षयेन्मधुना सह ।
 नानारोगप्रशमना यत्कटुगन्धीदराणि च ।
 अथमांसं तथा ग्रीहामग्निमान्द्य-मरोचकं ।
 एतान् सर्वान् निहन्त्याग्नौ भास्करस्तिमिरं यथा ।
 महासत्पुञ्जयोनाम महंशेन प्रकाशितः ॥

24. VAJRAKṢĀRA.

वज्रचारम् ।

सामुद्रं सैन्धवं काचं यवचारं सुवर्चलं
 टङ्गणं खर्जिकाचारान्नुल्लं सर्वं विचूर्णयेत् ।
 अर्कचौरैः सहोच्चौरैरातपे भावयेन्म्राहं ।
 तेन लिङ्गाकपञ्च रुहाचान्तः पुटे पचेत् ।
 तत्चारं चूर्णयेत् पश्चात् वूषणन्निफलारजः ।
 जीरकं रजनीवज्जिनवभागं समं समं ।
 शराईमेव सर्वेषु ण्कौकल्य प्रयोजयेत् ।
 वज्रचारमिदं सिद्धं स्वयं प्रोक्तं पिनाकिना ।
 सर्वोदरिषु गुल्फेषु शूलदोषेषु योजयेत् ।
 अग्निमान्द्यैःपि भक्ष्यं निष्कष्यं वयं ।
 वाताधिके जलं कोष्णं घृतं वा पैत्तिके हितं ।
 कफे गोमूत्रसंयुक्तं मारलान् विदोषजे ॥

25. CANDRĀNANA RASA.

चन्द्राननोरसः ।

सुतव्योमाग्रयन्तुल्यान्निभागी गन्धकस्य च ॥
 काठोडुम्बरिकाचौरैः सर्वं मिकतं मईयेत् ॥

माषमाचां शुङ्गीं कृत्वा कुष्ठरोगे प्रयोजयेत् ।
 देहशुद्धिं पुरा कृत्वा सर्वं कुष्ठानि नाशयेत् ।
 एष चन्द्राननो नाम साक्षात् श्रीभैरवोदितः ॥

26. VĀLA RASA.

वालरसः ।

पलं शुद्धस्य सूतस्य गन्धकस्य पलं तथा ।
 सुवर्णमाक्षिकस्यापि भागाह्नं संप्रकल्पयेत् ।
 ततः कज्जलिकां कृत्वा लौहपात्रमध्ये दृढे ।
 कैशराजस्य भङ्गस्य निर्गुण्ययाः स्वरसेन च ।
 शुभं शिलामये पात्रे कौहदण्डेन मर्दयेत् ।
 राजिकासहशीर्षैव वटिकां कारयेद्भिषक् ।
 एकेकां वटिकां खादन्नागपक्षादलद्रवैः ।
 हन्ति त्रिदोषसम्भूतं ज्वरस्यैव सुदारुणं ।
 चिरज्वरस्य कासस्य शूलं सर्वमेवनादा ।
 शिशूनां रोगनाशाय शिवेन परिकीर्तितः ॥

27. SRĪ MĀNMATHA RASA.

श्रीमन्मथरसः ।

रसगन्धकयोराह्नं कर्षमेकं सुशोधितं ।
 षष्ठं निशन्दकं दद्यात् पलाहं सुविचक्षणः ।
 कर्पूरं शणकं दद्याद्दण्डस्य कोलसम्भितं ।
 ताश्च कोलाहकं तत्र निःशेषमारितं क्षिपेत् ।
 लौहं कर्षं सुजीर्णस्य हृद्ददारकबीजकं ।
 विदारौ शतमूलौ च चरवीजं वलां तथा ।
 मर्कटतिवला चैव जातीकोषफली तथा ।
 खवङ्गं विजयाबीजं चेतसर्जं यमानिका

एतेषां चूर्णमादाय प्रलिपेत् शाण्डसम्भितं ।
 गुञ्जाद्वयञ्च भोक्तव्यं कोष्णं क्षीरं पिवेदनु ।
 गृहे यस्य शतं स्त्रीणां विद्यन्तेऽतिव्यवायिनः ।
 न तस्य लिङ्गशैथिल्यमौषधस्यास्य सेवनात् ।
 न च शुक्रं क्षयं याति न बलं क्वासतां व्रजेत् ।
 कामरूपी भवेद्विल्यो वृद्धः षोडशवर्षवत् ।
 रसायनवरो बल्यो बाजीकरण-उत्तमः ।
 रसः श्रीमन्मद्यो नाम महिम्नेन प्रकाशितः ॥

28. VASANTATILAKA RASA.

वसन्ततिलकीरसः ।

इक्षीभण्णकतोलकं घनं द्विगुणितं लौहाक्षयः पारदा ।
 यत्नारो नियतानु वङ्गयुगलक्षेकीकृतं महं येत् ।
 मुक्ताविद्रुमयो रसेन समता गोचुरवासिष्ठा ।
 सर्वं वन्यकरीषकेषु सुदृढं तप्तं पचैत् सप्तधा ।
 कसूरीघनसारमर्द्धितरसः पथात् सुसिद्धो भवेत् ।
 कासद्यास-सपित्तवातकफजित् पाण्डुलवादीन् हरैत् ।
 श्लादिचक्षुर्भीषा विषादिहरणो मेघां सदा विंशतिं ।
 हृद्गोगादिहरो ज्वरादिशमनो वृष्यो वयोवर्धनः ।
 शोष्ठः पुष्टिकरी वसन्ततिलकी मृत्पुञ्जयेनीदितः ॥

29. MAKARADHVAJA.

मकरध्वजः ।

स्वर्णस्य भागौ वङ्गश्च मौक्तिकं कान्तलीहकं ।
 जातौकोषफले रूप्यं कांक्षकं रससिन्दूरं ।
 प्रवालं कसूरी चन्द्रमधकश्चैकभागिकं ।
 स्वर्णसिन्दूरतो भागाश्चत्वारः कल्पयेद्बुधः

नातः परतरः श्रेष्ठः सर्व्वरोगनिमूदनः ।

सर्व्वलोकहितायार्थं श्रियेन परिकीर्तितः ॥

30. MAHĀ NĪLAKANTHA RASA.

महानीलकण्ठरसः ।

पलैकं नागभस्माद्य भावयेत्तिमिपित्ततः ।

तद्भागं सुसृतं खर्णं तोलैकं वापि मिश्रयेत् ।

रिपलं भस्मसूतस्य क्षिपलं सूतमभकं ।

विपलं लौहभस्माद्य सर्व्वमेकत्र कारयेत् ।

भावयेच्च पृथक् कन्या ब्राह्मीनिर्गुण्डिका शमी ।

सुख्डी शतावरौ क्षिद्रा कीकिलाक्षस्य बीजकैः ।

मूषली हृद्ददारोमिद्रवेरेभिर्मिश्रवरः ।

ततः सञ्चूयैत् सर्व्वं तुल्यमेकादशभिधं ।

वराव्योषाब्दवङ्गला जातौफललवङ्गकं ।

पूजयेद्दृषपुष्पाद्यैर्नीलकण्ठं महेश्वरं ।

दिगुघ्नं भणयेदस्य सत्युच्चयमनुष्मरन् ।

स्यमेकादशभिधं यद्वर्णं रक्तपित्तकं ।

विविधान् वातजान् रोगान् चत्वारिंशदपैत्तिकान् ।

हन्ति सर्व्वामयानिव कामिनौनां शतं व्रजेत् ।

यद्येष्टाहारवेष्टो हि कन्दर्पसदृशी नरः ।

मेधावो बलवान् प्राप्नो ब्रह्माशी भीमविक्रमः ।

पुत्रार्थिनी तथा नारी सैव पुत्रं प्रसूयते ।

अस्य सूतस्य साहाय्यं वेत्ति शश्वन्चापरः ॥

31. JĀRANA AND BHAKṢAṆA OF MICA AND MERCURY.

इत्यनुवासनं ।

जारणा हि नाम पातनगालनव्यतिरेकेण घनहिमादिषासपूर्व्वकपूर्व्वावस्थाप्रतिपन्नत्वं
किञ्चघनहिमादिलोहजौर्णस्य कृतचेचौकरणानामेव शरीरिणां भक्षणेऽधिकार इत्यभि-
हितम् । फलञ्चास्य स्वयसीश्वरेणोक्तं ॥१५॥

सर्वपापचर्ये जाते प्राप्यते रसजारणा ।
 तत्प्राप्तौ प्राप्यमेव स्वादिज्ञानं मुक्तिलक्षणं ।
 मोक्षाभिव्यञ्जकं देविः जारणात् साधकस्य तु ।
 स्ववस्तुपिच्छिका देवि रसेन्द्री लिङ्गमुच्यते ॥
 मईनं वन्दनमेव यासः पूजाभिधीयते ॥
 यावद्दिनानि वज्रस्थो आरणे धार्यते रसः ।
 तावद्द्वयसङ्ख्याणि शिवलोके महीयते ॥
 दिनमेकं रसेन्दस्य यो ददाति हुताशनं ।
 द्रवन्ति तस्य पापानि कुर्वन्प्रपि न लिप्यते ॥ १६ ॥

अथ यामतादिविधिः ।

अजारयद्भक्षमहेमगन्ध

वाञ्छन्ति सूतात् फलमप्युदारं ।

चेत्वादनुमादपि शस्त्रजातं

लघौवलासे भिषजस्य मन्दाः ॥

शुक्लगन्धेषु जीर्णे तु शुद्धाच्छतगुणाधिकः ।
 बङ्गुणे गन्धके जीर्णे रसो भवति रोगहा ॥
 तुल्ये तु गन्धके जीर्णे शुद्धाच्छतगुणो रसः ।
 द्विगुणे गन्धके जीर्णे सर्वकुष्ठहरः परः ॥
 त्रिगुणे गन्धके जीर्णे सर्वजात्यविनाशनः ।
 चतुर्गुणे तत्र जीर्णे बलीपलितमाशनः ॥
 गन्धे पञ्चगुणे जीर्णे चये जयहरी रुजः ।
 षड्गुणे गन्धके जीर्णे सर्वरोगहरी रसः ॥
 अथश्चमित्युवाचेन्द्रं देवः श्रीभैरवः स्वयं ।
 गन्धपिष्टिकया तत्र गोलः स्याद्गन्धजारणे ॥
 तस्माच्छतगुणो व्योमसत्वे जीर्णे तु तत्समे ।
 ताप्यखर्परतालादिसत्वे जीर्णे गुणावहः ॥
 हवि जीर्णे सङ्घसैकगुणसंघप्रदायकः ।
 अज्रादिजीर्णमतस्य गणान् वेति शिवः स्वयं ॥

32. CURNARĀJA.¹

चूर्णराजः ।

चूर्णराजस्तथा चायं स्वयं रुद्रेण भाषितः ।

जगतामुपकाराय दुर्णामारिरयं ध्रुवम् ॥

स्थानादपैति मेरुश्च पृथ्वी पर्येति वा पुनः ।

पतन्ति चन्द्रताराश्च मिथ्या चेदं नहि ध्रुवम् ॥

ब्रह्महन्तृकृतप्लाश्च क्रुराश्यासत्यवादिनः ।

वर्जनीया विदग्धेन भिषना गुरुनिन्दकाः ॥

33. CANDRAPRABHĀ GUḍIKĀ.

चन्द्रप्रभागुडिका ।

त्रिमिरिपुदङ्गनव्योषविफलामरदारुचव्यभूनिम्बम् ।

मागधिमूलं सुप्तं सशठीवचं माषिकञ्चैव ॥

लवणचारनिशायुगकुम्भुगुजकणातिविषाः ।

कर्षाशिकान्येव समानि कुर्यात्

पलाष्टकं चाश्वजतीर्विदध्यात् ॥

निस्पतगुल्लस्य पुरस्य धौमान्

पलहयं लोहुरजस्तथैव ।

सिताचतुष्कं पलमव वांश्या

निकुम्भकुम्भविमुगन्धियुक्तम् ॥

चन्द्रप्रभेयं गुडिका प्रयोज्या

अर्शांसि निर्वाणयते षडेव ।

भगन्दरं पाण्डुककामलाय

निषैष्टवज्रेः कुरुते च दीप्तिम् ॥

हन्त्यामयान् पित्तकफानिलोत्थान्

नाडीगते मर्द्यगते व्रणे च ।

गन्धार्बुदे विद्रधि राजयक्षणि

मेहे भगाव्ये प्रवली च योज्या ॥

¹ This formula is the same as the formula No. 38, Sāñkara Lauha, described in page 64.

शुकचये चाश्मरिसूवकृच्छ्रे
 शुकप्रवाहेऽप्युदरामये च ।
 भक्तस्य पूर्वं सततं प्रयोज्या
 तक्रानुपानं त्वयमनुपानं ॥
 आजीरसो जाङ्गलजीरसो वा
 पयोऽथवा शीतजलानुपानम् ।
 वलीन नागसुरजो जवेन
 दृष्ट्वा सुपर्णः श्रवणे वराहः ॥
 शुकदीपान् निहन्त्यष्टौ
 प्रमेहानपि विंशतिम् ।
 वलीपलितनिर्भृत्को
 ब्रह्मोऽपि तरुणायते ॥
 न पानभोज्ये परिहार्यमस्मि
 न शीतवातातपमैद्युनेषु ।
 शम्भुं समभ्यर्च्य कृतप्रसादि-
 नातागुह्यैचन्द्रमसा प्रसादात् ॥
 अचमाधिकं स्पर्शमाधिकम्
 युगशब्दस्य विष्वे व सम्बन्धः ।
 तेन सैन्धवसौवर्चसे यवचार
 सर्जिकाचारौ हरिद्रादारुहरिद्रे

किञ्च दशसुलकाद्ये चतुर्गुणे उष्णे पचादिरक्षितनिरवकरगुग्गुलु' प्रक्षिप्यालीङ्ग्य
 वस्त्रपूतं विधाय प्रचष्टातपे विशेष्य पिष्टितगुग्गुलीः पलद्वयम् । सिताचतुष्कमिति
 पलचतुष्क' । निकुम्भोदनी, कुम्भस्त्रिहता, एतयोः प्रत्येकं पलमेकं । छायासुष्कवटी
 कार्या ॥

34. RASA SĀRDDĪLA.

रसशार्दूलः ।

वलिःसूतीनिम्बुरस समरसौ भव्य सिकता

त्रयेयन्ते कृत्वा समरविकषाटङ्गणरजः ।

तिघसं लुङ्गाम्भोलवकदलितचौद्रहविषा
 विलौढोमपैकं दरयति समस्तं गदगणम् ॥
 जरां वर्षकेन चपयति च पुष्टिं वितनुते
 तनोस्तेजस्कारं रमयति वधूनामपि शतम् ।
रसः श्रीमान् मृत्पुञ्ज इति गिरिशेन सदितः
 प्रभावं कोवान्मः कथयितुमपारं प्रभवति ॥

लुङ्गाम्भोलवकदलित इति मातुलुङ्गद्रव्यकणशो दत्त्वा विदिनं मर्द्दयेदित्यर्थः ॥

35. SRĪ KĀMEŚVARA MODAKA.

श्रीकामेश्वरमोदकः ।

सम्यङ्मारितसम्भक्तं कटुफलं कुहाङ्गगन्धमायताः ।
 मेथीमोचरसौ विदारिसुशली गोधुरकखेरकम् ।
 रम्भाकन्दशतावरी त्वजमुदा सायासिला धान्यकम् ।
 यष्टीनागवला वला मधुरिका जातीफलं सैन्धवम् ।
 भागीकण्टकं विकटुकं जीरकं चित्रकम् ।
 चातुजातपुनर्बवा गजफला द्राक्षागटी वासकं ।
 बीजं मर्कटिशाखलीभवमिदं चूर्णसमं कल्पयेत् ।
 चूर्णं वाङ्मात्रजया सिता विगुणित्वा मध्वाज्ययोः पिष्टितम् ।
 कर्षाङ्गं शुङ्गिकाथ कर्षमयवा सेव्या सता सर्वदा ।
 पेयं चौरयुतं सुवीर्यकरणे सम्प्रेष्यं कामिनाम् ।
 वामावगुणकरः सुखातिमुखदः प्रौढाङ्गनाद्रावकः ।
 क्षीणे पुष्टिकरा ज्वरज्वरकरो हन्याश्र सन्ध्यामयम् ।
 कामनासमहातिसारशमनो मन्दाग्निमन्दीपनः ।
 दुष्प्राप्तमयहृषीप्रमेहनिवहस्तं आसृपितप्रसृतम् ।
 निव्यानन्दकरो विशेषकवितावाचां विलासोद्भवं ।
 धत्ते सर्वगुणं महास्थिरमतिबालो नितान्मोत्सवः ।
 अभ्यासेन विहन्ति मृत्युपलितं कामेश्वरो वत्सरात् ।
सर्वेषां हितकारिणा निगदितः श्रीवैद्यनाथेन सः ।

ब्रह्मणां मदनीदृशेदयकरः प्रौढाङ्गनासिवने ।
सिंहोऽयं सम दृष्टिप्रव्ययकरोभूपैः सदा सेव्यताम् ॥

36. ŚIVA GUṢṬIKĀ.

शिवा गुडिका ।

काले तु रवितापाय्ये कृष्णायसर्जं शिलागतप्रवरम् ।
त्रिफलारससंयुक्तं ब्राह्म्यं शुष्कं पुनः शुष्कम् ॥
दशमूलस्य गुडं च रसे वलायास्तथा पटोलस्य ।
मधुकरसैर्गोमूत्रे ब्राह्मं ब्राह्मं भावयेत् क्रमशः ॥
एकाहं क्षीरेण तु तत् पुनर्भावयेच्छुष्कम् ।
सप्ताहं भाव्यं स्यात् कायेनैषां यथात्माभम् ॥
काकोल्यौ द्वे मेदे विदारीशुष्मं शतावरी द्राक्षा ।
ऋद्धियुगर्भभवीरामुखितिका जीरकेऽशुमन्वी च ॥
राक्षापुष्करचिचकदन्तीभकणाकलिकचव्याब्दाः ।
कटुका शङ्खी पाठे तानि पलांशिकानि कार्याणि ॥
अव्द्रीणे साधितानां रक्षेन पादांशिकेन भाष्यानि ।
गिरिजस्यैवं भावितशुद्धस्य पलानि दश षट् च ॥
त्रिपलस्य विश्वमागधिकाकटुककैटाख्यमरिचानाम् ॥
चूर्णं पल द्वे विदार्यास्तालीशपलानि चत्वारि ॥
षोडशं सितापलानि चत्वारि हृतस्य माचिकस्याष्टौ ।
तिलतैलस्य त्रिपलं चूर्णार्द्धपलानि पञ्चानाम् ॥
त्वक्क्षीरिपत्रत्वक् नागेलानां मिश्रयित्वा तु ।
गिरिजस्य षोडशपलैर्गुडिकाः कार्यास्ततोऽक्षसमाः ।
ताः शुष्का नवकुम्भे जातीपुष्पाधिवासिते स्थाप्याः ॥
तासामेका काले भक्त्या पेयापि वा सततम् ॥
क्षीररसदाहिसरसाः सुरासवं मधु च शिशिरतोयानि
आलीङ्गानि तासामनुपानि वा प्रशस्यन्ते ।
जीर्णं लघुघ्नपयोजात्रलौनिर्व्यूहयूपभोगौ स्यात् ।
सप्ताहं यावदतः परं भवेत् सर्वं सामान्यम् ॥

भुक्तापि भक्षितेयं यदृच्छया नावहृदयं किञ्चित् ।
 निरुपद्रवा प्रयुक्ता सुकुमारकैः कानिभियैव ॥
 संवत्सरप्रयुक्ता हन्ये वा वातशोणितं प्रबलम् ।
 बहुवार्षिकमपि गाढं यच्चाण्छाब्धवातश्च ॥
 ज्वरयोनिशुक्रदोषहीनार्शः पाण्डुरहृषीरोगान् ।
 ब्रध्नवमिगुल्फपीनसहिकासासृचिश्चासान् ॥
 जठरं शिवं कुष्ठं घाण्ड्यं क्लैवं मदं चयशोधम् ।
 उन्मादापस्मारी वदनाचिशिरोगदान् सर्वान् ॥
 श्वानाहमतौसारं सासृग्दरं कामलाप्रमेहांश्च ।
 यक्तद्वन्द्वानि विद्रधिभगन्दरं रक्तपित्तञ्च ॥
 अतिकाशमतिस्थूलं स्वेदमद्य द्यौपदेञ्च विनिहन्ति ।
 दंष्ट्राविषं समीलं गराणि वक्षप्रकाराणि ॥
 मन्त्रीषधियोगान् विप्रयुक्तान् भीतिकांस्तथा भावान् ।
 पापालज्जग्री चयं शमयेद्गुडिका शिवा नाम्ना ॥
 वल्ग्या हृष्या घन्या कानि, यशःश्रीप्रजाकरौ चयम् ।
 दद्यान्मृगपवह्मभतां जयं विवादे सुखस्या च ॥
 श्रीमान् प्रकटमेधाः स्मृतिवृद्धिबलान्वितोऽतुलशरीरः ।
 पुष्ट्योऽतिविमलैन्द्रियतेजोबलसम्पदुपेतः ॥
 बलीपलितरोगरहितो जीवेच्छरदां शतस्य पुरुषः ।
 संवत्सरप्रयोगाद्वाभ्यां शतानि चत्वारि ।
 सर्वामयजित् कथितं मृगिगणभक्ष्यं रसायनरहस्यम् ॥
 समुःभूवास्यतमन्यनीत्यः स्वेदः शिलाभ्यो स्रुतवद्विरेः प्राक् ।
 यो मन्दरस्यात्मभुवा हिताय न्यस्तः स शैलेषु शिलाजरूपी ॥
 शिवागुडिकेति रसायनमुक्तं गिरौशेन गणपतये ।
 शिववदनविनिर्गता यस्मान्नाम्ना तस्माच्छिवा गुडिका ॥
 शैवसिद्धान्तोक्तो शिवागुडिकीयम् ।

37. KRAVYĀḌA RASA.

क्रव्यादरसः ।

द्विपलं गन्धकं शुद्धं द्रावयित्वा विनिक्षिपेत् ।
 पारदं पलमानेन सतशुक्लायसी पुनः ॥
 तेन मानेन संमिश्र्य पञ्चाङ्गुलदले क्षिपेत् ।
 ततो विचूर्ण्य यत्र न निक्षिप्यायसपात्रके ।
 चूर्णां निवेश्य यत्र न ज्वालयेन्मृदुनानलम् ।
 प्रस्यमात्रं रसं सम्यक् जम्बीरस्य प्रयोजयेत् ।
 संचूर्ण्य पञ्चकोलीलैः कषायैः सास्त्रवेतसैः ॥
 भावनाः खलु दातव्याः पञ्चाशत् प्रमितास्तथा ।
 षट्ष्टङ्कणचूर्णेन तुल्येन सह मिलयेत् ॥
 तदर्थं कृष्णलवणं सर्वतुल्यं मरीचकम् ।
 सप्तधा भावयेत् पश्चात् चणकचारवारिणा ॥
 ततः संशीथ्य संपिथ्य कूप्यास्तु जठरे क्षिपेत् ।
 अत्यर्थं गुरुमांसानि गुरुभोग्यान्मनिकशः ॥
 भक्षित्वा कण्ठपर्यन्तं चतुर्वर्गमितं रसम् ।
 पटुस्त्रतक्रसहितं पिवेत्तदनुपानतः ॥
 क्षिप्रं तज्जीर्यते भुक्तं जायते दीपनं पुनः ।
 रसः क्रव्यादनामायं प्रीक्तो मल्यानभैरवैः ^१ ॥
 सिंहलचौष्टिपालस्य बहुसांसप्रियस्य च ।
 दिष्टोयासंसमासाद्य भैरवानन्दयोगिना ॥
 कुर्याद्दीपनमुद्भूतं च पवनं दुष्टामयीच्छोषणम् ।
 तुन्दसौख्यनिवर्हणं गदहरं शूलार्तिमूलापहम् ॥
 गुल्मीघृविनाशनं लघुभुजां विघ्नसंनखसनम् ।
 वातप्रन्थिमहोदरापहरणं क्रव्यादनामा रसः ॥

¹ This formula is ascribed to Manthāna Bhairavā, one of the noted Indian alchemists. It is wrongly referred to Śiva.

38. SAṆKARA LAUHA.

शङ्करप्रणीतं लौहम् ।

प्रणम्य शङ्करं रुद्रं दण्डपाणिं महेश्वरम् ।

जीवितारोग्यमम्बिच्छन्नारदोऽपृच्छदीश्वरम् ॥

सुखोपायेन हे नाथ ! शस्त्रचाराग्निभिर्विना ।

चिकित्सामर्शसां नृणां कारुण्यात्कुमर्हसि ॥

नारदस्य वधः युत्वा नराणां हितकाम्यया ।

अर्शसां नाशनं श्रेष्ठं मेघज्यं शङ्करोऽवदत् ॥

पाराक्च वज्रादिलोहानादायान्यतमं शुभम् ।

कृत्वा निर्मलमादौ तु कुनद्या माचिकेण च ॥

पशुरमूलकक्लेन लिम्पेद्रसयुतेन च ।

“ कुनटी ” सनःशिलाः । “ माचिका ” सुवर्णमाचिकम् ।

“ पशुरं ” पटकार इति लोके । “ रस ” पारदः ।

वज्रीनिक्षिप्य विधिवत् साराङ्गारेण निर्हमेत् ।

ज्वाला च तस्य रोहज्या चिफलाया रसेन च । “ सारः ” काष्ठं ।

ततो विज्ञाय गलितं शङ्कुनीर्धं समुक्रियेत् ।

चिफलाया रसे पूते तदाकृष्य तु निर्हमेत् ॥

न सम्यक् गलितं यत्तु तेनैव विधिना पुनः ।

भ्रातं निर्ध्वापयेत्तर्हिज्जोहं तन्निफलारसे ॥

धक्कीहं न सृतं तच्च पाच्यं भूयोऽपि पूर्येवत् ।

मारणात् सृतं यच्च तत् व्यक्तव्यमलोहवत् ॥

ततः संशोष्य विधिवद्गूरुयैकोहभाजने ।

लौहं तच्च तथा यत्स्याद्वपदा सूक्ष्मचूर्णितम् ॥

कृत्वा लौहमये पात्रे सत्तिकालितरन्ध्रके ।

रसेः पट्टीपमं कृत्वा तं पचेद् गोमयाग्निना ॥

पुटानि क्रमशो दद्यात् पृथगेभिर्विधानतः ।

चिफलाद्रकभङ्गानां केशराजस्य बुद्धिमान् ॥

मानकन्दक भङ्गात् वङ्गीनां शूरणस्य च ।
 हस्तिकर्णपलाशस्य कुलिशस्य तथैव च ॥
 “भृङ्गः” भेङ्गरिया । “केशराजः” केशराग इति ।
 पुटे पुटे चूर्णयित्वा लोह्नात् घोड़शिकं पलम् ।
 तन्मात्रं विफलायाश्च पल्लिनाधिकमाहरेत् ।
 अष्टभागावशेषे तु रसे तस्याः पचैद् बुधः ॥
 अष्टौ पलानि दत्त्वा च सर्पिषी लौहभाजने ।
 तात्रे वा लोहदर्श्या तु चालयेद्विधिपूर्वकम् ॥
 ततः पाकविधानत्रये चेशोहंश्च सर्पिषि ।
 सदुमध्यादिभिर्देन गृहीयान् पाकमादतः ॥
 आरम्भे तद्विधानत्रयः कृतकौतुकमङ्गलः ।
 भामरं हृतसंयुक्तं विलिप्त्वाद्रक्तिकाक्रमात् ।
 द्वादशरक्तिकापर्यन्तं यथाश्रितं खादेत् ॥
 वर्त्तमानानुपानञ्च गव्यक्षीरेण संयुतम् ।
 गव्याभावे त्वजायाश्च स्निग्धहृष्यादिभोजनम् ॥
 सद्यो वज्रिकरश्चैव भस्मकश्च नियच्छति ।
 हन्ति वातं तथा पित्तं कुष्ठानि विषमज्वरम् ।
 गुल्माधिपाण्डुरोगाश्च निद्रालस्यमरोचकम् ।
 शूलञ्च परिणामञ्च प्रमेहमववाहकम् ।
 श्वयथुं रुधिरस्त्रावं दुर्न्नामानं विशेषतः ।
 बलकृष्टं हृणक्षैव कालिदं स्वरबोधनम् ।
 शरीरलाघवकरमारोग्यं पुष्टिवर्द्धनम् ।
 आयुष्यं त्रीकरश्चैव वलतेजस्करं शुभम् ॥
 सस्त्रीकं पुष्पजननं बलीपलितनाशनम् ।
 दुर्न्नामारिरयं नास्ति दृष्टो वारसहस्रशः ॥
 अनेनाशंसि दहन्ते यथा तूलञ्च वज्रिना ।

39. CANDRAPRABHĀ GUṬIKĀ.¹

चन्द्रप्रभागुटिका ।

क्रिमिरिपुद्घ्नव्योषचिकित्तामरदारुचव्यभूनिम्बाः ।
 मागधीमूलं मुक्तं शटी वषा धातुमाचिकचैव ।
 लवणचारनिशायुक्तुस्तुम्बुगजकणासहातिविषाः ।
 कर्षाशिकान्वेव समानि कुर्यात् पलाटकखाम्बजतु प्रदद्यात् ।
 निःपत्रशृङ्गस्य पुरस्य धीमान् पलद्वयं लोहुरजस्तथैव ।
 सिताचतुष्कं पलमव वा स्यात् निकुम्भ कुम्भ त्रिसुगन्धियुक्तम् ।
 पृथक्पलं चूर्णमथावपेक्ष चन्द्रप्रभेयं गुटिका विधेयाः ।
 ज्वरातिसारग्रहणीविकारचार्शंसि निर्नाशयते षड्वैव ।
 भगन्दरान् कामलपाण्डुरोगान् निर्नष्टवह्नेः कुरुते च दीप्तिम् ।
 हन्यामयान् पित्तकफानिलोत्थान् नाडीगते मर्मगतं व्रणे च ।
 क्षतक्षये गृध्रसि यक्ष्मारोगे मेहे गजाख्ये प्रवले प्रथोज्या ।
 शृङ्गक्षये चाश्वरीमूत्रकृच्छ्रे शृङ्गप्रवाहेऽप्युदरामये च ।
 शम्भुं समभ्यर्च्य कृतप्रसादं प्राप्ता गुटी चन्द्रमसा प्रशस्ता ।
 न पानभीज्ये परिहारवादी नशीतवातातपमैद्युनेषु ।
 भक्तस्य पूर्व्यं सततं प्रयोज्या तक्रानुपानाप्यथमस्तु पानम् ।
 अजारसो जाङ्गलज्वरसो वा पयोऽथवा शीतजलानुपानम् ।
 शृङ्गदीधान्निहन्त्यष्टौ प्रमैह्याद्यापि विंशतिम् ।
 वलिपलितनिर्मत्तो ब्रह्मोऽपि तरुणायते ॥
 गिरीजतुगुग्गुलुलौहान्देकौकल्याय भावयेद्वह्नुशः ।
 क्वाथैस्तद्वाधिहरैस्तदनु च चूर्णीकृतं मिलितम् ।
 क्रिमिरिपादिकचूर्णैर्गिरिजतुसमप्रधान्यपटोलयूथेण ॥

इति चन्द्रप्रभागुटिका ।

¹ This formula is the same as the formula No. 33, Candraprabhā Guṭikā, p. 58.

40. MAHĀ BHALLĀTAKA AVALEHA.

महाभल्लतातकावलेहः ।

निम्बगोपारुणा कट्टी वायन्ती विफला घनं ।
 पर्पटावल्गु जानन्तावचाखदिरचन्दनम् ।
 पाठाग्रच्छीशटीभार्गीवासाभूनिम्बवत्सकम् ।
 श्यामेन्द्रवारुणी मूर्ध्नाविडङ्गेन्द्रयवानलम् ।
 हस्तिकर्णाश्वताद्रेकापटीलरजनीदयम् ।
 कणारम्बधसप्ताह लहरेवोषटोफलम् ;
 मञ्जिष्ठा लाङ्गलीराखानक्तमालंपुनर्नवा ।
 दन्तीबीजकसारश्च भृङ्गराजं कुरण्टकम् ।
 अङ्कोटकश्च शाखोटं विपलांशं पृथक् पृथक् ।
 गृङ्गीयास्तानि सर्वानि जलद्रोणे पचेच्छनैः ।
 अष्टमांशवशेषन्तु कषायमवतारयेत् ।
 विधाय वाससा पूतं स्थापयेद्वाजने हृदे ।
 भल्लताकसहस्राणि हिला तु चार्मणेऽभसि ।
 पचेदष्टावशेषं तत्कषायमवतारयेत् ।
 गुडं शतपलं दत्त्वा लेहवत्तत्पचेच्छनैः ।
 त्रिकटु विफला मुस्तं विडङ्गं चित्रकं तथा ।
 सैन्धवं चन्दनं कुष्ठं दीप्यकं च पलं पृथक् ।
 सौगन्ध्यायं क्षिपेत् तत्र चातुर्ज्जातं पलं पलम् ।
 महाभल्लताको ह्येष महादेवेन भाषितः ।
 प्राणिनां हितकामेन जयेच्छीघ्रं प्रयोजितः ।
 श्वितमौडुम्बरं दद्रुश्चक्षुःक्षिप्तं काकणम् ।
 पुष्करिकं सचर्मार्क्यं विस्फोटं रक्तमण्डलम् ।
 कण्डूकापालकं कुष्ठं पामानश्च विपादिकाम् ।
 वातरक्तं घङ्ग्रांसि पाण्डुरोगग्रथान्क्रिमौ ।
 रक्तपित्तमुदावर्त्तं कासं श्वासं भगन्दरम् ।
 सदाभ्यासेन पलितमामवातं सुदुस्तरम् ।

निर्यन्त्रणस्तु कथितौ विहारहारमेशुने ।
 कुरुते परमं कान्तिं प्रदीप्तं जठरानलम् ।
 अगुपानं प्रयोक्तव्यं च्छिन्नातीयं पयोऽथवा ।
 भोजने तु सदा त्याज्यमुष्णमस्त्रं विशेषतः ।

41. RASĀLĀ.

रसाला

सर्वं शुद्धं वा गगनं सलोभ्रमीलासितामागधिकासमेतम् ।
 एतत् समेतं मधुनावलीढं रामाशतं सेवयतीव षष्ठः ॥
 गवां विरुद्धवत्सानां सिद्धं पयसि पायसम् ।
 गोधूमचूर्णञ्च यथा सितामधुघृतान्वितम् ।
 भुक्त्वा हृष्यति जीर्णोऽपि दशदारान् व्रजत्यपि ॥
 दध्नीऽर्द्धादकनीषदस्त्रमधुरं खखस्य चन्द्रद्युतेः
 प्रस्थं क्षौद्रप्रलम्पलञ्च हविषः शुण्ठ्याय माषाष्टकम्
 तद्वन्माषचतुष्टयं मरिचतः कर्षं लवङ्गन्तथा
 धृत्वा शुक्लपटे शनैः करतलेनोन्नाम्य विश्वावयेत् ॥
 सद्भाण्डे सगनांभिचन्द्रमरसस्रष्टेऽगुरुद्रूपिते
 कर्पूरेण सुगन्धितं तदखिलं संलीढ्य संस्थापयेत् ।
 स्वस्थार्थे मकरिन्द्रेण रचिता ह्येषा रसाला स्वयम्
 भोक्तुमर्हद्यदीपनी सुखकरी कान्तिव नित्यं प्रिया ॥

42. SĪMHAṆĀDA GUGGULU.

सिंहनादगुग्गुलुः ।

पलत्रयं कषायस्य विफलायाः सुचूर्णितम् ।
 सौमन्धिकपलत्रैकं कौशिकस्य पलं तथा ॥
 कुङ्कुमं चित्रतैलस्य सर्व्वमादाय यवतः ।
 पाचयेत् पाकविधेयः पात्रे लौहमये दृढे ॥

हन्ति वातं तथा पित्तं श्लेष्माणं खञ्जपशुताम् ।
 दासं सुदुर्जयं हन्ति कासं पञ्चविधं तथा ॥
 कुष्ठानि वातरक्तानि गुल्मशूलोदराणि च ।
 आमवातं जयेद्वैतदपि वैद्यविचर्जितम् ॥
 एतदभ्यासयोगेन जरापलितनाशनम् ।
 सर्पिसेलरसोपेतमग्नौष्याच्छालिषष्टिकम् ॥
 सिंहनाद इति ख्यातो रोगवारणदर्पणः ।
वक्रिहृदिकरः पुंसां भाषितो दण्डपाणिना ॥

43. FORMULA TO CURE ŚVITRA.

श्वेतजयन्तीमूलं पिष्टं पीतञ्च गव्यपयसेव ।
 त्रिवं निहन्ति नियतं रविवारे वैद्यनाथाज्ञा ॥

44. KUSUMBHĀDYA TAILA.

कुसुम्भाय तैलम् ।

कुसुम्भकुङ्कुमीशीरमन्निष्ठारक्तचन्दनैः ।
 सिक्थसर्जरसातङ्गुडूचैर्सेम्बवासुदैः ॥
 मूवांशतावरीलच्चासधुकैश्च पलांशकैः ।
 चतुर्गुणेन पयसा पचेत्तेलादृक् भिषक् ॥
 अर्द्धितं कर्णशूलं च शिरःशूलं च दारुणम् ।
 शृङ्गर्षीं वातरक्तं च पचाध्वतं व्यपोहति ॥
 तदक्षिपु च पानेषु नसे च कर्णपूरणे ।
 अभ्यङ्गे च शिरोरोगे तैलं विद्याद्यथाऽव्यतम् ॥
 पाणिपादांसदाहेषु मुदयोनिरुजासु च ।
सुतिवातेऽस्थिभङ्गे च देवदेवेन पूजितम् ॥

45. VRHAT SIVA GUṬIKĀ.¹

वृहच्छिवगुटिका ।

काले रवितापाक्के कृष्णायसे शिलाजतुप्रवरम् ।
 विफलारससंयुक्तं वाहं विष्टुडं पुनः शुष्कम् ॥
 दशमूलस्य गुडुष्या रसे वलायास्तथा पटोलस्य ।
 मधुकरसे गोमूत्रे प्रहरं भावयेत्क्रमश एकाहम् ॥
 क्षीरेण तु तत्परतो भावयित्वा गवां पुनः शुष्कम् ।
 सप्ताहं भाव्यं स्नात्काथेनैषां यथालाभम् ॥
 काकोल्यौ षे भेदे विदारि युग्मं शतावरी द्राक्षा ।
 षड्विद्युगर्भभवीरामुष्णीतिकाजीरकांशुमत्स्य ॥
 रास्त्रापुष्करचिवकदन्तीभक्तणाकलिङ्गचव्याब्दाः ।
 कटुका शङ्खी पाठा चैति पलांशानि कार्याणि ॥
 अद्रोणसाधितानां रसेन पादांशकेन भाव्यानि ।
 गिरिजस्यैव भावितशुद्धस्य पलानि दश षट् च ॥
 द्विपलं च विश्वधात्रीमामधिकाकर्पटस्थसरिचानाम् ।
 चूर्णपलं च विदार्या तालीसपलानि चत्वारि ॥
 षोडश सितापलानि तु चत्वारि घृतस्य माचिकस्याष्टौ ।
 तिलतैलस्य द्विपलं चूर्णस्य पलानि पञ्च पञ्चानाम् ॥
 त्वक्क्षीरिपतलङ्गुलैलानां च मिश्रयित्वा तु ।
 गिरिजस्य षोडशपलैर्गुटिकाः कार्यास्ततोऽक्षसमाः ॥
 ताः शुष्काः नवकुम्भे जातीपुष्पाधिवासिते स्थाप्याः ।
 तासामेका काले भक्ष्या पेयापि वा सततम् ॥
 क्षीररसदाडिमरसाः सुखासवा हिमकरशिशिरतोयानि ।
 आलोडनाय तासामनुपानि वा प्रशस्यन्ते ।
 जीर्णे लब्धन्नपथोजाङ्गलनिर्यद्द्यूषभोजी स्वात् ।
 सप्ताहं भोजनमेवमतः परं भवेत्सर्वसामान्यम् ॥

¹ This formula is the same as the formula No. 36, Siva Guṭikā, p. 61.

मुक्ताऽपि भक्तितयं यद्वच्छया नावहेद्वयं किञ्चित् ।
 निरुपद्रवा प्रयुक्ता मुक्तमारैः कामिभिश्चैव ॥
 संवत्सरं प्रयुक्ता हन्ये षा वातशोणितं प्रवलम् ।
 बहुवार्षिकमपि गाढं यस्मात् चान्द्रवातं च ॥
 ज्वरयोनिशुक्रदीपान् ग्रीहार्शः पाण्डुरहृदयहृत्पीरोगान् ।
 वर्धं वमिगुल्फपीनसहिकाश्वाराधिकासान् ॥
 जठरं शिवं कुष्ठं पाण्डुरं क्लैवं चयं मदं शोषम् ।
 उन्मादापघ्नारौ वदनाक्षिशिरोगताग्नीगान् ॥
 आनाहृततीसारमसृग्दरकामलां प्रमेहं च ।
 गलगण्डापघ्नर्वृद्धविद्रधिभगन्दरं रक्तपित्तं च ।
 अतिकाश्र्यमतिस्त्रौल्यं स्वेदमपि श्लेष्मदं च विनिहन्ति ।
 दंष्ट्राविषमतिभीमं गरलानि बहुप्रकाराणि ॥
 मन्त्रीषधिप्रयुक्तानरियुक्तान् कौलिकांस्तथा सर्पान् ।
 पापमलक्ष्मीं चैव शमयेद्गुटिका शिवा नाम ॥
 वल्ग्या हृष्ट्या धन्या कान्तिशः श्रीप्रजाकर्तु चैवम् ।
 दद्याद्भूपवत्प्रभतां जयं विवादे सुखस्था च ॥
 श्रीमाप्रकृष्टमेधाष्मृतिबुद्धिबलान्वितौ हृदयरीरः ।
 पुष्टयोजीवर्णेन्द्रियतेजोबलसंपदीपितः ॥
 बलीपलितरीगरक्षितौ जीवैष्करदां शतहयं पुरुषः ।
 संवत्सरप्रयोगात्, द्वाभ्यां शतानि चत्वारि ॥
 सर्वामयजिन्मृष्टितं मुनिभिर्भक्ष्या रसायनवरिष्ठम् ।
 शिपगुटिकेति प्रथितसुक्तं गिरिशेन गणपतये ॥

46. VYOŚĀDYĀ GUṬIKĀ.

व्योषाद्या गुटिका ।

व्योषं सद्यन्विकं पथ्या चित्रकं जीरकहयम् ।
 अजमोदां यवान्नीं च वचां चैवमवष्टुजम् ॥
 लवणवितयं चारं समभागानि चूर्णयेत् ।
 यावन्त्ये तानि द्रव्याणि तावन्तं गुग्गुलुं शुभम् ॥

पलार्धसंमितं चाव योजयेद्वास्त्रवेतसम् ।
 गुटिकैषा हिता वाते सानि सम्यग्स्थिमञ्जरी ॥
 नवं करोति भग्नं च जठरानलदीपन् ।
 पूजिता देवदेवेन कालपादेन शम्भुना ॥

47. VRĪHAT SĀYAMBHUYA GUGGULU.

वृहत्सायम्भुवगुग्गुलुः ।

अलम्बु घालीरुचूर्णमनघीर्षे पले पले ।
 पलत्रयं च ताप्युत्थादाकुची पलपञ्चकम् ॥
 शिलाजतु तथोस्तुत्यं पलानि दश गुग्गुलीः ।
 सर्वाण्येकत्र संचूर्ण्य गुटिकां कारयेद्बुधः ॥
 शाणं कर्षार्धं कर्षे वा ततः खाद्वैतयवतः ।
 वातरक्तं च कुठ्ठाति शिचाणि विविधानि च ॥
 भगन्दरान् शुद्ररोगानेर्शांसि यहण्योगदान् ।
 बलिजांस्कुक्कुटोषांश्च पाण्डुतामुदराणि च ॥
 शोफश्लेष्मपदमानाहं यच्चाणं च विशिषतः ।
 नाडीत्रयांश्च सर्वास्तु हन्याद्विद्रधिद्रवदगदान् ॥
 हृष्यो बल्यश्च धन्यश्च केश्यो निधाम्रिवर्धनः ।
 आयुर्वर्णकरस्तुत्यः पुत्रसौभाग्यदस्तथा ॥
 गर्भसन्धानकृतप्रोक्तो गर्भपुष्टिकरः परम् ।
 कालपादेन विख्यातो नाम्ना स्वायंभुवो भुवि ।

48. KUMARYĀSAVA.

कुमार्यासवः ।

द्रोणमानं कुमार्यास्तु रसं भास्त्रे निधापयेत् ।
 तुलार्धं दशमूलं तु तदर्धं पौष्करौ जटा ॥
 तक्षमं धन्वयासं च चित्रार्धं च परिचिपेत् ।
 प्रस्थार्धमस्तथा श्रेया तदर्धमभया तथा ॥

लोभकामलकं पथं मञ्जिष्ठा च कलिद्रुमः ।
 चव्यं च कुष्ठमधुकं कपित्थं मुरदारुकम् ॥
 कृमिशवर्मागधिका भार्गी स्वादृष्टवर्गकम् ।
 जीरकं क्रसुकी रास्ना शठी रेणुकमेव च ॥
 भङ्गी निशा प्रियङ्गुश्च मांसी सुप्ता च सारिवा ।
 वासा वरो शृङ्गवीजं नागकीसरमेव च ॥
 पुनर्नवा समांशानि षड्मिर्द्रोणीर्जलस्य तु ।
 काथयेदनया रीत्या चतुर्धां जलं नयेत् ॥
 विंशत्पला च स्रक्कीका दन्तसंस्थापलं सधु ।
 गुडस्त्रुलाचतुष्कं च तदर्धा धातकी भवेत् ॥
 पलद्वयं लवङ्गानि कङ्कीलं मलयोद्भवम् ।
 चातुर्जातं तथा कृष्णं सरिचं जातिपत्रकम् ॥
 आकल्लकं जातिफलं कपिकच्छुश्च दीप्यकम् ।
 वचा खदिरसारश्च दहनं जीरकं तथा ।
 यवान्नी बालकं विश्वा सुप्ता धान्यं हरीतकी ।
 हपुषा तिलिङ्गीकं च चूर्णमेषां प्रयोजयेत् ॥
 भाण्डे पुराणे सुस्निग्धे धूपिते गन्धमेषजैः ।
 कीष्ठसारे तथा तप्ते भूमौ मासं विनिक्षिपेत् ॥
 यो रोगी प्रातश्चत्वार्य पलमेकं तु भक्षयेत् ।
 धातुचयं जयेत्कासं त्रासं पञ्चविधं तथा ॥
 अर्शांसि वातरोगांश्च यक्ष्णीपाण्डुकामलाः ।
 हलीमकमुद्वतं गुल्मं पञ्चविधं जयेत् ॥
 आभानं कुक्षिशूलं च प्रत्याभानं गुदग्रहम् ।
 अष्टौलिकां च हृद्रोगानेतान् व्याधीन्विनिर्जयेत् ॥
 कुमार्धासव इत्येष कथितः शूलपाणिना ।

49. NĀLIKERĀSAVA.

नालिकेरासवः ।

नालिकेरोदकं चैव द्रोणमात्रं प्रदापयेत् ।

इदो रमस्य द्रोणार्धं शाकल्या रसप्रत्येकम् ॥

दशमूलरसस्यापि प्रस्थमात्रं तथैव च ।
 घृतभाण्डे विनिक्षिप्य मध्ये चूर्णं निवेशयेत् ॥
 चातुर्जातकधातकोः पलान् षोडशसंख्यया ।
 शाणमात्रा तु कस्तूरी केशरं तगरं तथा ॥
 चन्दनं देवपुष्पं च पलमात्रं पृथक् पृथक् ।
 मासादूर्ध्वं पिबेच्चासुं रूपे कामसमो भवेत् ॥
 ब्रह्मोऽपि तरुणीं गच्छेत् षष्ठोऽपि पुरुषाश्च ते ।
 वलीपलितसंयुक्तः शतायुश्च भवेन्नरः ॥
 नालिकेरासवः प्रोक्तः शङ्खुना परमेष्ठिना ।

50. VRHAT SAHACARA TAILA.

ब्रह्मसहचरतैलम् ।

काशे साहचरे शतात्रिर्युते क्षाद्रास्तैरखड्गे
 श्लोनाकारणिविल्लगोचरयुते सिंहाग्रिमयोद्भवे ।
 राख्योशीरविशालदारुतगरैस्तक्पतमेदानखेः
 स्पृक्काशैलधनैलवालुसरलैः कङ्कोलकुष्ठोत्पलैः ॥
 कौलीकेशीवलाद्रिसारिवनिशाग्यामांशताहानतै-
 र्मञ्जिष्ठापुरसिद्धचन्दनवरैर्यष्टाङ्गस्यौण्यकैः ।
 यौवेष्टागकरोध्रकुङ्कुमवरैः कल्कैः समांशैरिमै-
 स्तैलं क्षीरसमं विपाच्य विधिना वस्त्रौ च नखे ध्रुवम् ॥
 पानाभ्यङ्गविधौ नियोजितमिदं वातादिसर्वाभयान्
 गुल्माङ्गीलशिरोर्तिशूलमुदरं श्वासामकामज्वरम् ।
 शोफं प्रीहगुदामथं च जठरं धातुक्षयापानकं
 अर्शःकुष्ठभगन्दरं च समयेत्सर्वान् व्रणान् हन्ति च ॥
 जयति पवनरोगान् कामलां विद्विष्य
 दिननिशितिमिराभ्यं गृध्रसीं सूर्ध्विवातम् ।
 सहचरमिति नाम्ना तैलमेतत्प्रसिद्धं
 धनपतिनृपयोग्यं भाषितं शङ्खुनैव ॥

51. VIJOYĀ GUTIKĀ.

विजयागुटिका ।

पलत्रयं हरीतक्यादिचक्रस्य तथैव तु ।
 एलातकपत्रमुस्तानां भागोऽर्धपलिकः स्मृतः ॥
 व्योषं पिप्पलिसूलं च विषं च पलमात्रकम् ।
 नागकेसरचूर्णं तु कर्षं दद्याद्विचक्षणः ॥
 रौक्ताकर्षपलं चात्र रसस्य कर्षमेव च ।
 एतत्संभृत्य संभारं सूक्ष्मचूर्णं तु कारयेत् ॥
 गुडस्यार्धं तुलां दत्त्वादव्यां संभ्रन्निवधद्वयेत् ।
 ततस्तु गुटिकाः कृत्वा तस्मात्पृष्ठशततयम् ॥
 एकैकां भक्षयेत्प्रातः कृताहारो यथाबलम् ।
 मासिन पलितं हन्ति करोत्यग्निं द्वितीयकम् ॥
 शुक्रवृद्धिं तृतीये तु बलवर्णप्रसादनम् ।
 हन्यष्टादश कुष्ठानि सप्त चैव महाक्षयान् ॥
 ग्रीहानं व्यासकासीं च अन्तर्द्वल्लिखरोचकम् ।
 अशीतिं वातजान्निगाम्भूजकृच्छं भगन्दरम् ॥
 प्रमेहान्विंशतिं चैव तथाऽर्शांसि गल्यहम् ।
 सर्पलताविषं हन्ति सर्वं स्थावरजङ्गमम् ॥
 शोनिदोषमपकारमुन्नादं विषमज्वरम् ।
 वर्त्तनं गजतुल्योऽसौ वेगनं तुरगोपमः ॥
 मायूरस्तु भवेदग्निर्वाराहयोव एव च ।
 चटकः सौविलासिनं गृध्रदृष्टिश्च जायते ॥
 उपशोमात्परं जीवघ्नरी वर्षशतत्रयम् ।
 न चात्र परिहारोऽस्ति न चाध्वनि न मेघनं ॥
 याम्यधर्मं च कुर्वाणो भोजनं च यथैच्छया ।
 विजया नाम गुटिका विख्याता रुद्रभाषिता ।
 भक्षयन्ति नरा ये तु तेषां सिद्धिर्न संशयः ॥

52. KAULITIKĀ VARTI.

कौलीतिका वर्तिः ।

पलानि विंशतिं दाव्यां मूलतः संप्रकल्पयेत् ।
 जलं च षोडशगुणे रात्रिसिकां निधापयेत् ॥
 सदावधौ काथयेत् चतुर्थांशवशेषितम् ।
 निःस्वाय काथयेद्भूयस्त्वजाचौरिण संयुतम् ॥
 पादिकेन भिषग्दद्याद्वलेहत्वमागतम् ।
 अग्रदग्धं तु तं कल्कं क्षायायां परिशीलयेत् ॥
 कौलीतिका वर्तिरियं सर्षपैश्चरुजापह्ना ।
 सर्षाभिष्यन्दश्मनी स्वयं प्रोक्ता पिनाकिना ॥

53. SŪTA BHASMA.

सूतभस्म ।

सूतं सुगुहं लवणैश्चतुर्भिः चारुस्त्रिभिश्चापि विमर्दयेच्च ॥
 संशोष्य पयादपि ह्रिद्रुराजिकाशुण्ठीभिरभिय सप्तं विमर्दयेच्च ।
 रसेन सार्धं हि कुमारिकाया सूषां विदध्याद्रविषमं शोषिताम् ॥
 तस्यां निधायाथ रसस्य गोलकं तं स्नेदितं चास्त्ररसेन सम्यक् ।
 यामाष्टकेनाग्निकृतेन दोलया पयाद्रसेनाभिविमर्दितोऽसौ ॥
 भेकपण्डुरुबुध्ब्रजराजकैः शृङ्गवेरगिरिकर्णिकारसैः ।
 काकमाचौरसविभक्ति काजलैर्धूतैर्जैरपि अयन्तिकाद्रवैः ॥
 सिन्धुवारकरसेन विमर्दितं मसृणखल्लतले विवासरम् ।
 प्रतिरसं च विशोष्य हि भक्षयेद्भुजिकाहयमितं रुजापहम् ॥
 केकिमाहिषवराहपित्तकैः कक्षपस्य च रसेन मर्दितम् ।
 जायतेऽधिकतरं गुणेन वै सन्निपातभवमूर्च्छनं जयेत् ॥
 यः श्रीसूतवरस्य सेवनमिदं नित्यं करोतीह वै
 दीर्घायुर्धनधान्यधनसहितः प्राप्नोति सौख्यं सदा ।
 लोके कौर्तिपरंपरां वितनुते धर्मं मतिर्जायते
 पाने तस्य परा गतिर्हि नियतं सत्यं शिवेनोदितम् ॥

54. GANDHAKA TAILA PĀTANA.

गन्धकतैलपातनम् ।

कलांश्व्योषसंयुक्तं शुद्धगन्धकचूर्णकम् ॥
 बन्धे वितस्निमात्रे तु गन्धचूर्णं सतैलकम् ।
 विलिप्य वेष्टयित्वा च वर्ति मूत्रेण वेष्टयेत् ॥
 धृत्वा संदशतो वर्तिमध्यं पञ्चालयेद्य ताम् ।
 विद्रुतः पतते गन्धो विन्दुशः काचभाजने ॥
 तां द्रुतिं प्रक्षिपेत्प्रवे नागवक्ष्यान्निविन्दुकामः ।
 रसं वल्लभितं तच्च दत्त्वाऽङ्गुल्या विमर्दयेत् ॥
 तत्सर्वं भक्षयेत्पश्चाद्गोधूमां चानु संपिवेत् ।
 कानस्य दीप्तिं कुरुते क्षयपाण्डुविनाशनम् ॥
 यदृणीं नाशयेदृष्टां शूलार्तिश्चासकासकम् ।
 आमाजीर्णं प्रशमयेत्तुल्यं च पञ्चायते ॥
 गन्धकस्य गुणान् वक्तुं शक्तः कः शम्भुना विना ।

55. VĀTANĀŚANA RASA.

वातनाशनी रसः ।

मृतं स्पर्शं तासकं वज्रमेव
 लोहं ताप्यं तालकं तुल्यकं च ।
 अन्धेः किं शुद्धसौवीरकं हि
 कृत्वा सम्यक् सर्वमेवं समांशम् ॥
 भागं चैकं कारयेद्दे रसोऽनं
 वज्रचोरैर्मर्दितं तद्विनेकम् ।
 रुद्धा सम्यग्मूर्धरं तं विपाच्य
 माथं चैकं भक्षयेद्दार्द्रकेण ॥
 लिङ्गादिवं पिप्पलीमात्रिकेण
 कृष्णामूलकाद्यश्चानुपेयः ।
 सर्वाङ्गं वातान् वातजान् विकारान्
 हन्यात्तत्त्वं भाषितं भैरवेण ॥

56. TĀLAKARĀJA RASA.

तालकराजरसः ।

वङ्गं चाम्बं शोधितं तालकं हि सूतं गुडं वत्सनाभं तथैव ।
 सौवीरं चैङ्गुणं चैव व्योथं वङ्गं युष्मं भागमवैव कुर्यात् ॥
 अथ कुर्यात्त्रीणि भागानि सम्यक् सूतं चैकं तालकं वै त्रिभागम् ।
 नागं चैकं टङ्गुणं वेदभागं सौवीराङ्गी कल्पनीयी हि भागी ॥
 खल्वै भयं सर्वभेकत वज्रिरीरे चाकं वासरैकं प्रयवान् ।
 पश्चात्त्रेण्यं काचकृष्णां हि सर्वं कूपीवर्कं ताम्रपत्रेण रुग्ध्यात् ॥
 सुद्रां कृत्वा पाच्य यामाष्टयुष्मं शीतं कृत्वा पूर्ववन्मर्दनीयम् ।
 एषं कुर्यात्त्रीणि वाराणि गुडं कल्कं जातं धौडशांशेन ताम्रम् ॥
 शुभं कुर्यात्सर्वरोगप्रणाशं सत्यं चैतद्भाषितं भैरवेण ।
 सेव्यं वल्लं वर्षमेतत्प्रयद्वाद्दृढत्वं नो जायते सर्वकालम् ॥

57. SVARNA SINDURA.

स्वर्णसिन्दुरम् ।

शुक्लपत्रं सुवर्णस्य सुगुहं कोलसम्भितं ।
 गुडसूतं पलैकेन मेलयेत् यत्रतीभिषक् ।
 साईपलं गन्धकञ्च कृत्वा कज्जलिकां ततः ।
 निवेश्यकाचकृष्णाञ्च दद्यादां परिवेष्टयेत् ।
 तां कर्पटैश्च दासैश्च खटिकाभिः समन्ततः ।
 निरुध्यसम्यक् यत्र न संपृज्येष्टं सङ्गोमया ।
 बालुका-यन्त्रमध्ये तां सन्निरुध्य समाहितः ।
 पञ्च द्वादश यामांस्तु निर्व्यातिं च मुनिर्जने ।
 एकाकी पाकविद्दयाः स्याद्दशीतं समुद्धरेत् ।
 स्वर्णसिन्दूरमित्येतत् सर्वरोग निम्दने ।
 वातिकं पित्तकक्षैव शूलिकञ्च मुदरुणं ।
 रोगं सर्वं निहन्त्यायु भक्षणाद्वातसंशयः ।
 बलायुर्व्वर्द्धनं सम्यक् बलीपलितं नाशनं ।

अश्वरी-सूतिका-मिह गर्भिणीरोगनाशनं ।
सर्वलोक हितार्थाय स्त्रयंप्रोक्तं पिनाकिना ॥

58. PURṆA CANDRA RASA.

पूर्णचन्द्रो रसः ।

शुद्धाभरूप्यलीहानि कथंभावाणि चूर्णयेत् ।
मुवर्णं ताप्यकं वज्रं ओरकद्वय पादिकं ॥
लवङ्गं मुस्तकचैव तथा त्रिफलमिव च ।
एतच्चूर्णीकृतं सर्वं धोबी स्वरस महितं ॥
भावयेत् सर्वं चूर्णानि गतावर्या रमैस्तथा ।
द्विगुणा फल मानेन वटीं कार्या विचक्षणैः ।
अनुपान प्रभेदेन रोगे योगं प्रकल्पयेत् ।
नित्यं स्त्रो सेवनाद् यस्तु चीण शुको भवेन्नरः ॥
महाबली महावीर्यो जायते नात्र संशयः ।
नाशयेत् प्रवृत्तान् रोगान् प्रमेहं शपि विंशति ।
रावणस्य हितार्थाय ह्यकरोच्छरः पुरा ॥
पूर्णचन्द्रो रसो नाम सर्वं रोगेषु दुर्लभः ॥

59. BHASMEŚVARA RASA.

भस्मेश्वररसः ।

एकभागं बत्सनाभं त्रिभागं म(रि)चान्वितम् ।
भस्म षोडशभागं च काननोत्पलसम्भवम् ॥
सुज्जचूर्णं कृतं सर्वं नखं स्वास्त्रिपातनुत् ।
अथ भस्मेश्वरी नाम शम्भुना परिकल्पितम् ॥

60. ŚĪTABHANJĪ RASA.

शीतभञ्जीरसः ।

पारदं रसकं तालं तुल्यं गन्धकटङ्कणम् ।
सर्वभैतस्त्रयं शुद्धं कारवेज्जा रसैर्दिनम् ॥

मर्दयेत्तेन दिक्षाच्च तावपावोदरं घनम् ।
 अङ्गुलार्धमानेन तत् पचेत्क्षिकताद्यै ॥
 यन्म यावत्स्फुटन्थे व ब्रीह्यस्तस्य पृष्ठतः ।
 ततः मृशीतलं याक्ष्मासपावोदराङ्गैः ॥
 तत्समं मरिचं दत्त्वा सर्वमेकत चूर्णयेत् ।
 द्विगुणं पर्णखण्डेन वातिके पैत्तिके ज्वरे ॥
 गुञ्जकं ससितं दद्यात्त्रिगुणं व्योषयुक्ता ।
 मन्निपाते ज्वरे दियो बल्लैकमार्द्रकद्रवैः ॥
 त्रिदिनैर्विधमं तीव्रमेकदिविचतुर्थकम् ।
 नाशयेच्छीतभञ्जः (आप्यो) रसो रुद्रेण निर्मितः ॥

61. PUTRAPRADA RASA.

पुत्रप्रदो रसः ।

शुतसूतं त्राहं स्वेयं मन्दाग्री दध्नि माहिषे ।
 तुटिते तुटिते दद्याद्दधि तुयैऽङ्गि चोदरेत् ॥
 तस्मिन् खर्णं क्षिपेत्प्राज्ञश्चतुःषष्टितमांशकम् ।
 मर्दयेन्निम्बुनीरेण यावतैर्ध्वं हि जायते ॥
 पुनः संस्त्रेय तं सूतं वटशृङ्गाद्विवह्नियैः ।
 काकमाष्या च जीवन्त्या रसः स्थायामथुग्मकात् ॥
 दिनं शीताम्बु कुम्भस्थं दिनैकं दध्नि माहिषे ।
 एवं सिद्धरसाद्वह्णं प्रत्यहं ब्रह्मचर्यं धृक् ॥
 मासैकं सेवते भर्ता सितादुग्धैर्दिनप्रियः ।
 विफलानिम्बकापांसीरसेर्नारी कमापृथक् ॥
 सप्त सप्त दिनान् पीत्वा पथाद्भुतसमागमि ।
 रसं वत्तं त्राहं चैकं कापांस्त्वम्बुसितायुतम् ॥
 टङ्गणं तूरिका सूतं पक्वास्त्रिकरसान्वितम् ।
 त्रिदिनं मधुना योनेर्लेपं शुद्धिकरं परम् ॥
 महिष्या दधिमध्यस्थं दिवा सूतं त्रिमाषकम् ।
 श्रीसेवासमये रात्रौ भक्षयेद्दधिसंयुतम् ॥

संभोगान्ते तथा स्थेयं यामार्धं संपुटेन च
 सर्पलक्षणसंपन्नं सुतं जनयते वरम् ॥
 तापादिके समुत्पन्ने देयं द्राक्षासितादिकम् ।
 कार्यः शीतोपचारश्च युक्त्या भिषजा सदा ॥
 आयुर्हं हि बलं कान्तिं नष्टवीर्यविवर्धनम् ।
कुर्वाद्रोगहरः पुत्रप्रदो रुद्रविनिर्मितः ॥

62. SARVVA VYĀDHIHARA.

सर्वव्याधिहरः ।

रसीपरसखीहानि धान्याभादिविशेषतः ।
 गन्धत्रययुतं सुतं मारयेत्पुटयोगतः ॥
 पचितं चक्रयन्ते च गन्धकेन समन्वितम् ।
 विषं कलाशकं दत्त्वा दीपनीषधिभावितम् ॥
 पित्तेशोपविषैर्भाव्यं पुटौ माषप्रमाशिका ।
प्ल्यतो रसीश्वरः सुतः सन्निपातविनाशनः ॥
 भिषग्भिश्च प्रदातव्यं शीतस्नानं च रोगिणे ।
 अगदः सर्पदष्टश्च स्तनसंजीवनः परः ॥
 क्रामणेन समायुक्तः सर्वव्याधिविनाशनः ।
 नागवङ्गविषेर्द्युक्तं विना व्याधिं न सेवेयम् ।
सर्वव्याधिहरो नाम पुरा रुद्रेण भाषितः ॥

Serpent Worship.—The serpent worship existed almost in all countries in ancient times. It was especially prevalent in India, where even in the present day the cobra is held in great veneration. Its presence in a house is not always willingly disturbed and it is regarded by the inmates as the 'Vastudeva' the god of the house. It is not killed by the Hindoos but is allowed to go elsewhere, if it proves dangerous to their safety. Siva is represented as having snakes for his

ornaments. Three snakes twine round his body, neck and head and are represented with their heads expanded. So snake is considered to be one of the symbols of Śiva now. The gods are often represented with a canopy of five or seven cobras over them in the old cave temples. Vāsuki, the King of snakes, holds the world over his thousand hoods; and hooded snakes are said to have shielded Nārāyaṇa by the canopy of their hoods when he lay floating on water before he created this world.

In Egypt the old papyrus records show that snakes, especially cobras, are associated with divinity and they symbolise wisdom. The great Sun-god, the giver of light, is represented as crowned with the double uræus, the two cobras supporting the sun's disc. In China the concretions of snakes find a prominent place as a therapeutic agent.

In the description of the arms of the Society of Apothecaries in "Burke's Encyclopædia of Heraldry," 1851, we find serpents in the right hand of Apollo: "In shield, Apollo, the inventor of physic, with his head radiant, holding in his left hand a bow, and in his right a serpent." In the figure of Æsculapius, reproduced in Wotton's *Chronicles of Pharmacy* from the Cassalius Collection of Medals, etc. (17th century) we find a snake encircling the god.

CHAPTER II

BHĀSKARA

In the R̥gveda, the sun is celebrated under two different names, Sūrya and Savitri. Bhāskara or the Sun is also considered as the fountain-head of all knowledge in medicine. He is the father of the two Asvins. The idea that the Sun is a good physician, we can trace back to the R̥gveda where he is invoked for curing diseases : The Sun is dispelling disease (i. 35. 9).

And again in i. 50. 11-13 : "Oh Sun ! Cure the sickness of my heart and yellow colour of my body."

हृदरोगं मम सूर्यं हरिमाषं च नाशय R.V. हृदरोगं हृदयगतं चान्तरं रोगं हरिमाषं शरीरगतं कान्तिहरणशीलं वाक्शरीरं नाशय सूर्यं—Sāyaṇa. Again "Cure is to be prayed from the Sun"—आरोग्यं भास्करादिच्छेद

—आप्तवाक्य । Sūrya is styled as the son of Dyaus (Rv. x. 37. 1) or Aditi (Rv. x. 88. 11 ; viii. 90. 11). Uṣā or the Dawn is said to be his wife (Rv. vii. 75. 5) ; but in Rv. vii. 78. 3, she is described as to have produced Sūrya, Yajña and Agni. He is described as golden-handed (i. 22. 5), golden-eyed (i. 35. 8), golden-tongued (vi. 71. 3), but he is yellow-haired (x. 139. 1). He moves on a golden-car, drawn by seven radiant horses (i. 115. 3, 4 ; vii. 60. 3 ; 63. 2 ; x. 37. 3 ; 49. 7). He beholds all creatures, bears testimony to the good and bad deeds of mortals (i. 50. 2, 7 ; vi. 51. 2, etc.), and pursues an ascending and descending path (i. 35. 2-5 ; vii. 45. 1), which is prepared by the Ādityas, Mitra, Aryaman and Varuṇa (i. 24. 8 ; vii. 60. 4 ; 87. 1). Puṣān is his messenger (vi. 58. 3). He is the soul of all things, stationary and moving (i. 115. 1). He vivifies men (vii. 63. 2). He is the eye of Mitra, Varuṇa and Agni

(i. 115. 1 ; vi. 51. 1 ; etc.). He upholds the sky (x. 85. 1). He is identified with Indra (viii. 82. 1, 4), Dhātri, Savitri, and Viṣṇu (x. 170. 4), and is said to be possessed of all divine attributes (viii. 60. 1).

In the *Brahmāṇḍa Purāṇa* the birth of Aśvin twins is thus described : The parents of Vivasvān (the Sun) were Kāsyapa and Dākṣāyaṇi. Viśvakarmā had a daughter, Saṅgā Devī by name. She became the wife of Vivasvān and was called Surenu for her exquisite beauty. The beautiful, young Surenu was however not satisfied with her husband for she found him too hot to approach. Still she became the mother of Vivasvata Manu and the twins, Yamunā, a daughter, and Yama, a son. One day while in company with her lord, she felt the heat so unbearable, that she secretly gave life to her shadow which looked exactly like her own self and ordered her to remain with the Sun who should however be kept ignorant of the mystery—a promise only to be violated if the Sun insults the shadow. Surenu then went home to her father Viśvakarmā. As her father pressed her to go to the Sun again, she assumed the form of a mare, went to Uttarakuru and began to graze in the field.

The shadow in her turn gave birth to two sons—Sāvarṇa Manu and Śanaiścara, and she loved them more than her step-sons. Now it so happened that one day, Yama being enraged by her partiality to her own sons, insulted her by raising his foot against her. She in her turn blasphemed and uttered a curse “Let that leg fall away from your body.” Yama became frightened out of his wits and explained to his father what has happened, begged his pardon and prayed for the safety of his leg. The Sun meditated that there must be some secret cause of the quarrel for he knew his son to be truthful and pious. However he soothed his son and said : “My son ! it is beyond

my power to undo your mother's curse, but you need not be afraid for only some flesh of your foot would fall away." He next asked his wife about the cause of her strange behaviour towards her son, but she remained silent. Whereupon on meditation he became aware of the true cause, insulted the shadow and went out in search of his wife Surenu in the house of Viśvakarmā. The latter made him beautiful in appearance by his skill, divesting him of his superabundant heat. Then the Sun assumed the form of a horse, found out his wife in the form of a mare, walked in company and gave birth to the twins, the Nāsatya and Dasra, who are known as the Asvin twins—the famous physicians. Yama atoned for his sin and became the Religion incarnate; Vaivasvata Manu became the progenitor of the human race, Yamunā became the river, Śānaiscara formed the planet Saturn in the sky, and Sāvārṇa Manu became absorbed in meditation so that he may be the originator of men in the next Manvantara or creation.

In Vedic times the Sun was regarded as the custodian of the eyes. Muir says¹: "In the Atharvaveda viii. 2. 3, a man dead, or in danger of dying is addressed in these words: वातात् ते प्राणम् अविदम् सूर्याच् चक्षुरहम् तव । यत् ते मनस् त्वयितद् धारयामि सम्-
वित्स अङ्गं वद जिह्वया आलपन् । 'I have obtained thy breath from the wind, thine eye from the sun; I place in thee thy soul (मनस्); have sensation in thy limbs; speak, uttering (words) with thy tongue.' Compare A. V. v. 24. 9: सूर्यश्चक्षुषाम् अधिपतिः । 'Surya is the superintending lord of the eyes': and in A. V. xi. 8. 31: सूर्यश्चक्षुर्वातः प्राणम् पुरुषस्य वि मेजिरे ॥ 'Sūrya occupied the eye, and Vāta (the wind) the breath of Puruṣa (or man).' See also A. V. xix. 43. 2, 3. Compare further Plato, *Repub.* vi. 18, where Socrates says of the eye: πᾶλ

¹ Muir . *Sanskrit Texts*. Vol. V, p. 298, foot-note.

ηλιοειδεστατον γε οιμαι των περι τας αισθησεις οργανων. 'I regard it (the eye) as of all the organs of sensation, possessing the most affinity to the sun.' Eur. Suppl. 532 f. *Οθεν δεκαστον εις το σωμ αφικετο εντανθ απηλθε, πνευμα μεν προς αιθερα, το σωμα δεσ γην.* 'But each element of the body has departed to the quarter whence it came, the breath to the æther, the body itself to the earth.' A similar idea is expressed in a verse of Goethe, which I had formerly read, and for a copy of which, with the context, I am indebted to Professor Aufrecht. The passage occurs in the introduction to the *Farbenlehre* (Ed. 1858, Vol. XLVIII, p. 5). and is as follows : 'Hierbei erinnern wir uns der alten ionischen Schule, welche mit so groszer Bedeutsamkeit immer wiederholte : nur von gleichem werde Gleiches erkannt ; wie auch der Worte eines alten Mystikers, die wir in deutschen Reimen folgendermassen ausdrücken möchten :

Wär' nicht das Auge sonnenhaft,
Wie könnten wir das Licht erblicken ?
Lebt' nicht in uns des Gottes eigne Kraft,
Wie könnt' uns Göttliches entzücken ?

Jene unmittelbare Verwandtschaft des Lichtes und des Auges wird niemand läugnen, aber ' u.s.w."

Books :—

1. Bhāskara Saṁhitā : A treatise on medicine by Bhāskara. The work is not procurable now, but it is referred to in the *Brahmavaivarta Purāṇa*.¹

2. Jñāna Bhāskara : " Conversations between *Sūrya* and his charioteer *Aruṇa* (*Kāśyapa*) on the evils of human existence, their causes and remedies." It deals with different diseases—the result of our actions in a previous life—

¹ See foot-note, p. 7.

“ The pathological descriptions are sometimes very detailed, but the method of their cure is entirely of the piacular order ; medical treatment being jealously excluded, and almost every case being represented as *duścikitsyatama*, and only to be approached by penance, sacrifices and donations to the officiating priests.”

Beginning : नमः श्रीहरयीवाय । श्रीगणेशाय । श्री नमः श्रीसूर्याय ।

आनन्दयन् ब्रधमनःकमलं स्वभाभिः

प्रध्वंसयन् ब्रजिनदुर्दिनमंतरां ।

कल्पांतरौपचितकर्मविलोक हितुः

स ज्ञानभास्कर उदेत्तु ह्यदेवरे नः ॥

संदिह्यमाने संदिग्धे संधिच्छति च वस्तुनि ।

ज्ञानमुद्गासयन्नेष जयति ज्ञानभास्करः ॥

यते मये स्वविषयानवाप्रज्ञानमंडले ।

पुरुषेऽर्काशसंभूते प्रविष्टे चार्कमंडले ॥

प्रणम्य शिरसा देवं भानुमते कृताञ्जलिः ।

प्रश्रयादनतो भूत्वा अरुणो वाक्कमव्रवीत् ॥

MSS. :—1. I. O. 2719.

2. Berl. Cat., p. 287.

3. Or. 1254 (British Museum).

Formulæ attributed to Bhāskara :—

Formulæ.	thor.	Books.	Page.
1. Bhāskara Lavaṇa ...	Bhāskara...	C. D.	... 72
		B. P. Vol. II	... 314
		B. K. V.	...
Bhāskara GūrṇaŚā. Ś.	... 9
Bhāskara Lavaṇa GūrṇaŚā. S.	... 123-4
9. Udarka Rasa	Saṁkṣiptasāra of S. K. D.	... 53

1. BHĀSKARA JVAṆA.

भास्करलवणम् ।

पिप्पली पिप्पलीमूलं धन्याकृष्णजीरकम् ।
 सैन्धवश्च विडञ्चैव पतं तालीशकेशरम् ॥
 एषां द्विपलिकान् भागान् पञ्चसौवर्चलस्य च ।
 मरिचाञ्जलि शुण्ठीनामिकैकस्य पलं पलम् ॥
 त्वगेलि चार्द्धं भागं च सामुद्रात् कुडवद्वयम् ।
 दाडिमात् कुडवञ्चैव द्वे पले चासवेतसात् ॥
 एतच्चूर्णीकृतं शृण्वं गन्धाम्बुमस्यतोपमम् ।
लवणं भास्करं नाम भास्करेण विनिर्मितम् ॥
 जगतस्तु हितार्थाय वातघ्ने भामयापहम् ।
 वातगुल्मं निहन्त्येतत् वातशूलानि यानि च ।
 तक्रमन्तुसुरासौधुशक्तकाजिकथोजितम् ॥
 जाङ्गलानान्तु मांसीन रसेषु विविधेषु च ।
 मन्दाग्ने बध्नतः शक्नो भवेदाग्नेव पावकः ॥
 अर्शांसि यदृषीदोषं कुष्ठामयभगन्दरान् ।
 हृद्रोगमामदोषांश्च विविधानुदरस्थितान् ॥
 ग्रीहानमश्मरीञ्चैव चासकासीदरक्रिमौन् ॥
 विशेषतः शर्करादीन् रोगान् नानाविधांस्तथा ।
 पाण्डुरोगांश्च विविधान् नाशयत्यशनिर्वया ॥

BHĀSKARA CŪRṆA.

भास्करचूर्णम् ।

तालीशयन्त्रिधान्येभवरविडकणा कृष्णश्रीरच्छदाश्च
 सामुद्रं विश्वजीरोषणमयस्ककं त्वक् वट्टी दाडिमं द्वैः ।
 विश्ववृष्टिपञ्चैकचतुरवयवैर्भास्करोऽन्नेऽद्यवाग्धे
 गुल्फामार्शोऽर्त्तिकासयदृष्टिजठरहृत्त्वग्गदघ्ने भवाते ॥

BHĀSKARA LAVANA CŪRṆA.¹

भान्तरलवणचूर्णम् ।

सासुद्रलवणं कार्यमष्टकर्ममितं वृधैः ।
 पञ्चसीवर्चं लं यास्य' विङ्'सैश्वधान्यकम् ॥
 पिप्पली पिप्पलीमूलं क्षणजीरकपचकम् ।
 नागकेशरतालीशमस्त्रवेतसकं तथा ॥
 हिकर्षमावाण्येतानि प्रत्येकं कारयेद्बुधः ।
 मरिचं जीरकं विशमैकैकं कर्षमाचकम् ॥
 दाडिमं स्याच्चतुःकर्षं त्वगंशे चार्द्धकार्षिके ।
 बीजपूररसेनैव भावितं सप्तवारकम् ॥
 एतच्चूर्णीकृतं सर्वं लवणं भान्तराभिधम् ।
 शाणप्रमाणं दयन्तु मस्तुतक्रसुरासवेः ॥
 वातघ्ने षडभवं गुल्मं श्लीहानसुदरचयम् ।
 अर्शांसि यक्षणीं कुष्ठं विङ्'विवन्धं भगन्दरम् ॥
 शोफं शूलं आसकासन्धामदोषश्च हृद्गुणम् ।
 भन्दाग्निं नाशयेद्वैतद्वीपनं पाचनं परम् ।
 सर्वलोकहितार्थाय भान्तरैषोदितं पुरा ॥

२. UDARKA RASA.

उदकौरसः ।

कोलमानगणं सुमारितं
 रक्तभस्मववीजसम्भवं ।
 तत्समं मस्तमुवर्णशानकं
 मानमानमथ श्लीहचूर्णकं ॥
 मर्दयेदथ कुमारिकाद्रवे—
 —राट्कौ परिमितां वटीचरेत् ।
 भक्षयेन्मधुकणायुतां जयेत्
 सूतिकाख्यगद माय दारुणं ॥

¹ For a translation of the formula, see Dutt's *Materia Medica of the Hindus*, pp. 86-7.

सामवायुकफसम्भवं गदं

हृलयाशु सकलं जयेद्भुवं ।

वर्ण-बुद्धि-बल-मांस-शीणितं

वर्णयेद्यसुदर्कसंश्रकः ॥

भास्करेण कथितो रसेश्वरः

सौमरीगकुलनाशनीपि सः ॥

In the R̥gveda the following hymns refer to Sūrya :—

- Rv. i. 50. 1: The sun knows all animated creatures.
 2: He drives away the night.
 3: His rays observe all people.
 4: Sun, the source of all light.
 5: He rises before gods and men.
 6: Sun invoked as purifier and destroyer of evil.
 7: Sun makes the day.
 8: Sun is borne in his car by seven horses.
 9: He is driving in a car drawn by seven "daughters of the car."
 10: He is the best of all light.
 11: Sun is prayed for to cure heart disease, हृदरोग and Harimāṇa disease or yellowness of body.
 12: We transfer the yellowness of (our body) to Śuka and Śārikā birds, and to turmeric.
 युकेषु मे हरिमाणं रोपणाकासु दधमि ।
 अथो हारिद्रवेषु मे हरिमाणं नि दधमि ॥
 13: He has destroyed my diseases.
115. 1: Sun, the soul of animated and inanimated creations.

- i. 115. 2 : Sun follows the Dawn.
 3 : Harits are his horses ; they spread over the world.
 4 : Night falls when these horses are unharnessed.
 5 : The Harits, when the sun is in the middle of the sky, hold his unusual splendour on one side, but cause darkness on the other side.
 6 : The Harits are prayed to absolve us from our sins.
191. 8 : The Sun is rising in the East. He destroys all the unseen (poisonous creatures) and the Jātudhānīs.
 9 : He is rising for the good of all creatures. He destroys the unseen poison.
 10 : I throw the poison in the orb of the Sun. As he does not die, so we will not die. The Sun-god, driving his horses, destroys the poison at a distance. The poison is converted into nectar.
 11 : The small bird "Sakuntika" ate the poison.
 12 : Agni has twenty one flames. They destroy the poison.
 13 : I shall recite the names of ninety nine rivers which destroy the poison.
 14 : Let twenty one peahen and seven rivers destroy the poison in the body.
 15 : The small animal mongoose will destroy the poison.
 16 : The mongoose came and said "oh Scorpion, your poison is sapless"

- iv. 13. 1 : Sun is rising.
 2 : The devas begin their works.
 3 : Seven horses carry the sun, who knows
 all living beings.
 4 : Sun's rays drive away the night.
 5 : Sun as a pillar supports the heaven. None
 can stop his journey.
- v. 40. 5 : Āsura Svarbhānu covered Sun with
 darkness.
 6 : Indra then dispelled darkness.
 7 : Prayer of Sūrya to Atri and King Varuṇa.
 for help.
 8 : Atri made eyes for Sun by mantras.
 9 : Atri's sons dispelled darkness caused by
 Svarbhānu.
45. 1 : Sun has risen after dispelling darkness.
 2 : Sun is spreading his light.
 9 : Sun, the lord of seven horses, is coming
 down and is spreading light through
 his rays.
 10 : His worshippers are drawing Sun, as he
 rides on his horses across the bright
 waters like a vessel.
59. 5 : The maruts are covering the eyes of Sun
 by rains.
- vii. 60. 1 : O Sūrya, tell us that we are to-day sinless.
 2 : Sun, the witness of men. He nourishes
 the animate and the inanimate.
 3 : The seven horses are carrying him. He
 sees all places and all animals.
 4 : Mitra, Aryamā and Varuṇa make way
 for Sun.
- x. 37. 1 : Sun, the son of sky, sees all objects.

- x. 37. 2 : The sky, days, the world, the living beings and sun rest on truth.
- 3 : Prayer to Sun to rise with his unusual splendour.
- 4 : O Sun, with your rays, remove our poverty, and destroy our sins, diseases, and bad dreams.
- 5 : You have been sent to protect the various works of the world.
- 6 : May we be long-lived, and enjoy happiness till old age.
- 7 : May we every day see you, with healthy body and surrounded by progeny. May we live for ever and see you.
- 8 : You are pleasing to all. May we see you every day with our living bodies.
- 9 : Oh yellow-haired sun ! May we see you rise every day.
- 10 : May your sight do us good and may your days and your rays, your coldness and your heat be good to us, whether we live in houses, or travel on roads.
- 11 : May all the animals, biped or quadruped, under our charge be happy ; let all animals eat, drink and be well-nourished and strong.
- 12 : Transfer our sins to those who are averse to charity and who try to injure us.
170. 1 : Prayer to Sūrya to grant long life to sacrificers. He protects all living beings and nourishes them.
- 2 : Sun is luminous, large, well-placed in the sky, and gives food to all.

- x. 170. 3: He is the first and foremost of all luminous bodies. He conquers all, and is the giver of light. He is the very strength and energy.

4: Your strength nourishes the whole world.

See also Nirukta, xii. 14-16.

Hymns in the R̥gveda addressed to Savitā :—

- Rv. i. 22. 5: Golden-handed (द्विवर्णवानि) Savitā is prayed for protection.

6: Savitā absorbs water.

7: Savitā, the distributor of riches, and illuminator of men.

8: Savitā, the giver of riches.

35. 1: Savitā is prayed for protection.

2: Dispelling darkness, awakening men, he is travelling over the world in his golden car.

3: He has two roads—upwards and downwards. He moves by two white horses.

4: His golden car with golden yokes.

5: The white legged horses harnessed to golden yokes are drawing his car.

6: As the car rests on the pin of the axle, the moon and the stars rest on the sun.

7: His rays are full of vibrations, and are life giver.

8: Savitā, the golden-eyed.

9: Savitā is removing diseases.

10: He destroys Rākṣasas and Yātudhānas.

11: His ancient paths in the sky are free from dust.

- ii. 38. 1 : He rises every day to produce the world.
 2 : The luminous, large-handed Savitā extends his hands. For him the water flows and the wind blows.
 3 : Night falls after his work is done. Then all men cease work.
 4 : Men do work when he rises again.
 5 : Mother Dawn, sent by Savitā, bestows her son Agni the main share of sacrifices.
 6 : When the Sun sets, men return home.
 7 : You have allotted trees to birds. None can injure Savitā.
 8 : Varuṇa gives shelter to all animals that move. Birds and beasts return to their abodes.
 9 : Indra, Varuṇa, Mitra, Aryamā or Rudra do not injure Sun.
 10 : Men adore him ; he protects the wives of the devas. May we be his favourite in acquiring and hoarding riches and animals.
 11 : May we get riches from Sun.
- iii. 56. 6 : Prayer to Savitā or Bhaga to send us riches thrice every day.
 7 : Mitra, Varuṇa, Earth and Sky expect riches from Sun.
62. 10 : We meditate on the adorable splendour of the divine Savitā who directs our intellect aright. This is the famous Gāyatri prayer of the Brahmins.
 12 : We pray for food and riches from Savitā and Bhaga.

- iv. 53. 1: Let the great Savitā give us riches every day.
- 2: Savitā, the Prajāpati or lord of creation wears golden armour.
- 3: He sends his rays every day for the act of creation.
- 4: Savitā, who obeys fixed laws, is the Lord of the world.
- 5: He kindly nourishes me by the three seasons—Summer, Rain and Winter.
- 6: May Sun bestow happiness on us.
- 7: May he come with the Seasons. May he give us sons and son's sons with food.
54. 1: Prayer for riches.
- 2: You produce Soma, the cause of immortality; you give us life.
- 3: Prayer to make us sinless.
- 4: He is the support of the world.
- 5: Give us house to live in. The men obey your command.
- 6: We sacrifice Soma for you thrice every day. May Indra, Earth, Sky, Sindhu and Ādityas make us happy.
- v. 81. 1: The splendour of god Savitā is beyond the power of hymns.
- 2: He whose form is the universe (विश्वम्), does good to the bipeds and the quadrupeds.
- 3: The other gods derive splendour and strength from Sun.
- 4: Oh Savitā, you join with the Sun's rays. You pass through nights on both sides. Be our friend by your deeds.

- v. 81. 5: You rule the works of all creatures. You become Puṣā by your motion.
82. 1: Prayer for riches.
 2: None can destroy the famous riches of Savitā.
 3: Prayer for riches from Savitā or Bhaga.
 4: Give us progeny and riches, and drive away our bad dreams.
 5: Remove our bad luck and send us what is good for us.
 6: May we be sinless before Aditi.
 7: We adore Sun, the truthful and the protector of good men.
 8: We contemplate the adorable Sun.
 9: He resuscitates all living beings.
- vii. 35. 8: May Sun be peaceful to us. May water be peaceful to us.
 9: May air be peaceful to us.
 10: May Savitā be peaceful to us.
38. 1: He sends his golden rays.
 2: Kindly hear our prayers.
 3: You protect and nourish us.
 4: Aditi, Varuṇa, Mitra and Aryamā pray Savitā.
 5: May goddess of speech nourish us through our cows. Abivudhnya is mentioned as a name of Sun.
 6: Prayers for riches. Bhaga another name of Sun.
 7: May the Rākṣasas be injured and the chronic diseases be removed from us.
 8: Nourish us through milk.
45. 1: May Savitā appear with riches in hand for the good of men.

- vii. 45. 2 : Prayer to Savitā.
3 : Let Savitā send us riches.
4 : Good-tongued Savitā with riches in his hands.
149. 1 : Savitā has kept this earth steady by many appliances without any support ; he has tied down the heaven, he gets water from clouds full of water.
2 : Savitā, son of water. From him have appeared the earth, the sky, the heavens, and the worlds.
3 : The other immortal gods have appeared after him.
4 : Let the adorable Savitā come to us like a husband to his wife.
5 : We are careful for your service (nursing).
-

INDRA.

Indra is represented in the Vedas as the chief of the gods in heaven, and to him the highest divine attributes are often ascribed in the R̥gveda. But he stands in the second rank in the Purāṇas, as next to the famous triad : Brahmā, Viṣṇu and Maheśvara. He is the son of Kaśyapa; his weapon is the thunderbolt made either of iron (1.80.12; 1.81.4) or of the bones of the sage Dadhici. His Vāhana is the elephant Airāvata and he is said to have destroyed the stone-built cities of the Asuras. He is slayer of Vṛtra in battle, though the honour is also claimed by other gods, and the recoverer of cows from the Panis. His horses are called Hari (1.10.3; 1.16.2; 1.20.2; 1.81.4; 1.167.1) and also Etāsa (1.121.13). His devotion to Soma juice is proverbial and more hymns are addressed to him than to any other gods in the Vedas. His wife is Indrāṇī, better known as Śacī (1.82.526), and his son, Jayanta. In later literature his sensuality is much dilated upon. In Mahābhārata he is said to have seduced Ahalyā, the wife of the sage Gautama, and in Rāmāyaṇa he appears to have been defeated by Megha-nāda, the son of Rāvaṇa, king of Ceylon, as a punishment for the seduction. The legend how he was compelled by the sage Cyavana to allow the Aśvins to partake of the Soma libations is related elsewhere (see Cyavana).

He learned the Science of Medicine from the Aśvins and then taught the science to Ātreya and Bharadvāja.

अग्निभ्यां भगवान् शक्रः प्रतिपेदि ह केवलम् ।

अग्निप्रोक्तो भरद्वाजस्तस्माच्छक्रमुपागमत् ॥

ब्रह्माश्रुत्वाऽऽयुषो वेदं प्रजापतिमभियहत् ।
सोऽश्विनौ तौ सहस्राक्ष सोऽत्रिपुत्रादिकान्मूनीन् ॥

Aṣṭāṅga Hṛdaya Saṁhitā, I.

संहस्त दस्योरिन्द्रः कर्माण्ये तानि यववान् ।
आयुर्वेदं निरुहेगं तौ ययाचे शचीपतिः ॥
नासत्यौ सत्यस्त्रन्वेन शक्रेन किल याचितौ ।
आयुर्वेदं यथाधीतं ददतुः शतमण्डवे ॥
नासत्याभ्यामधीत्येय आयुर्वेदं शतक्रतुः ।
अध्यापयामास बहुनावेय प्रसुखान् सुनीन् ॥

Bhāva Prokāśa, I. i.

In the *Yayurveda* xxv. 46-47 k (2 & 3), Indra is prayed for medicine and health. With reference to the healing skill of Indra, see the *R̥gveda* vii. 1, v. 12, as well as the *Atharvaveda* xiv. 2, v. 12 :—"That is the Bountiful one, who without a ligature, before the severance of the cervical cartilage, effect a union."¹

Indra is said to have entered into the womb of Diti and cut the foetus into seven pieces. See *Rāmāyaṇa*, I. xlvī.

तस्याः शरीरविबरं प्रविशेय पुरन्दरः ।
गर्भेऽस्य सहधा राम । चिच्छेद परमात्मवान् ॥
भियमानस्ततो गर्भो बभूव शतपर्व्वणा ।
रुरोद सुस्वरं राम । ततो दितिरब्रुध्यत ॥

Rāmāyaṇa. i. xlvī, vs. 18 & 19.

In the *Kuśa Jātaka*, *Ayūdā*, wife of King *Ikṣvāku*, obtained from Indra a pill which promoted pregnancy. This she dissolved in water, and took a small quantity of the mixture, distributing the rest of it to her rivals.²

His disciples.—Indra is said to have taught the sages *Bṛghu*, *Aṅgirā*, *Atri*, *Vasiṣṭha*, *Kaśyapa*, *Agastya*, *Pulastay*,

¹ Hoernle, J. R. A. S., 1906, p. 922.

² Mitra, *Nepalese Buddhist Literature*, p. 110.

Vāmadeva and Asita Gautama, about the Rasāyaṇa or the Science and Art of 'Tonics to prolong life from the Āyurveda, which he received from the Aśvins. These formulæ, as taught by Indra, are called Aindriya Rasāyaṇa

* * * *आयुर्वेदमन्त्रिणी मन्त्रं प्रवच्छताम् । प्रजापतिरन्विभ्याम् । * * *
अथेन्द्रस्तद्रायुर्वेदाश्चतस्रिभ्यः संक्रन्त्योवाचैतं सर्व्वमनुष्ठेयम् ।

Caraka Saṁhitā. VI. i, p. 323.

INCIDENTS OF INDRA'S LIFE.

1. He killed Śuṣṇa Asura and helped Kutsa: 1.11.7; 1.33.12; 1.51.6; 1.63.3; 1.101.2; 1.103.8; 1.121.9; 1.175.4; 2.14.5; 2.19.6; 3.31.8; 4.16.9-12; 4.30.13; 5.29.8; 6.18.8 and 13; 6.26.3; 7.19.2; 8.1.28; 8.6.14; 8.51.8; 8.53.2; 8.96.17; 10.49.3; 10.61.13; 10.99.9.
2. Killed Asura Ahi: 1.32.1.5.13-14; 1.61.8; 1.80.1; 1.103.2 and 7; 2.11.5; 2.12.3; 2.15.1; 4.19.9; 5.17.9; 6.18.13.
3. Killed Vṛtra Asura: 1.32.5-11; 1.23.11 and 13; 1.51.4; 1.54.10; 1.56.5-6; 1.57.6; 1.61.10-12; 1.80.4-7,10,12; 1.84.13-14; 1.103.2,8; 1.121.11; 2.11.18; 3.31.8; 3.32.4; 5.17.8; 7.19.5; 8.8.19; 8.6.16; 8.15.3; 8.32.26; 10.48.8; 10.49.6; 10.113.3.
4. Killed Pani and helped Aṅgiras: 1.32.11-12; 1.51.3; 1.62.2-3; 1.101.5; 6.33.2.
5. Killed Pipru Asura and helped R̥gīśvāna, son of Uśija: 1.51.5; 1.101.2; 1.103.8; 2.14.5; 4.16.13; 6.18.8; 8.32.2; 8.49.10; 10.99.11; 10.138.3.
6. Killed Śamvara, son of Kulitara and helped Divodāsa: 1.51.6; 1.54.6; 1.101.2; 1.103.8; 2.12.11; 2.14.6; 2.19.6; 4.16.13; 4.30.20; 6.26.3; 6.31.4; 6.43.1; 6.47.21; 7.18.20.

7. Killed Arbuda: 1.51.6; 2.11.20; 2.14.4; 4.30.14; 8.3.19.
8. Killed Arya and Citraratha (4.30.18), Urana (2.14.4), Aśna (2.14.5), Aśusa (2.19.6), Krivi (2.22.2), Savara (6.18.8) and Ili's soldiers (1.33.12).
9. Killed Namuci (1.53.7; 2.14.5; 7.19.5), Rauhin (1.103.2), Kuthava (1.103.8), Dāsa (7.19.2), Kujava (1.104.3-5; 7.19.2), Aju (1.104.4; 2.19.6; 6.31.3), Dṛbhika (2.14.3), Rudbrika (2.14.5), Varci's son (2.14.6; 4.30.15), Mṛgaya (4.16.13; 8.3.19), Tugra and Vetsu (6.26.4); Vartī Dāsa (6.47.21) and sons of Vṛcivān, son of Varaśikha (6.27.4-5).
10. Killed 6,066 sons of Anu and Druhyus (7.18.14), Bheda (7.18.19), Divaka, son of Manyamān (7.18.19), Sṛvinda and Anarśani (8.32.2), Abiśu (8.32.2 and 26; 8.77.2), Aurnabābha (8.32.26; 8.77.2), Parnaya and Karandha (10.48.8), Navavāstva and Vṛhadratha (10.49.6), Nṛsadad's son (10.61.13), Visvarupa, son of Tvaṣṭā for Tritā (10.8.9) and his own father (4.18.12; Taitt. 5.6.1.3.6).
11. Killed Karañja and Parnaya for king Atithigva (Dibodāsa): 1.53.8; 6.18.13; 8.53.2.
 - „ Vāñgrda for King Ṛgiśvāna: 1.53.8.
 - „ Kṛṣṇa's pregnant wives for King Ṛgiśvāna: 1.101.1; 1.130.8.
 - „ 20 kings and 60,099 soldiers for King Suśravā: 1.53.9 and 10.
 - „ Surya, son of Svaśva for King Sudāsa and Etaśa: 1.61.15; 2.19.5; 5.29.15; 8.1.11; 8.50.9.
 - „ Amhā Asura for king Sudāsa: 1.63.7.

- Killed Kavi, son of Cayamāna for king Sudāsa : 7.18.8.
 „ Kujabāca for King Duryyoni : 1.174.7.
 „ Cumuri and Dhuni for King Dabhiti : 2.15.4
 and 9 ; 6.18.8 ; 6.26.6 ; 7.19.4 ; 10.113.9.
 „ Vyaṁsa Asura : 4.18.9.
 Drowned Śauta, Kavasa, Vridhu and Druhyu : 7.18.12.
12. Opened the caves of Vala Asura and
 Saved the Devas : 1.11.5 ; 6.18.5 ; 8.14.8.
 „ Kutsa : 1.33.14 ; 1.106.6 ; 8.1.11.
 „ Daśadyu : 1.33.14.
 „ Śvitrā's son from drowning : 1.33.15.
 „ Praskanna : 8.3.9.
 „ Atri, Vimada and Aṅgirā : 1.51.3.
 „ Ruśam, Svāvaka and Kṛpa : 8.3.12 ; 8.4.2.
 „ Rumaśa : 8.4.2.
 „ Kings Narya and Turvīti of Varya Dynasty :
 1.54.6.
 „ Kings Turvaśu and Jadu : 1.54.6 ; 1.174.9 ;
 4.30.17 ; 8.4.1 ; 10.49.8.
 „ Sage Turvīti from drowning : 1.61.11.
 „ blind and lame Parāvṛga and made him see
 and walk : 2.13.12 ; 2.15.7.
 „ Agastya for cows, Arīśu for riches and Sau-
 bhari for food : 8.5.26.
 „ Adhigru (8.12.2) ; Tryasdasyu (8.36.7 ; 8.41.10),
 Dirghanakha (8.50.10).
13. Helped King Āyutta (6.18.13), Āyu (8.53.2), Uśana
 (10.99.9), Parāvṛtta, son of Agru (4.30.16), Tur-
 vajāna (Divodāsa-Sāyaṇa) (1.53.10).
 Gave young Vṛcasā as wife to old King Kaksivāna :
 1.51.13.
 „ riches to Kanva, (8.49.10, 8.50.10), Paktha
 (8.49.10), Daśavraja (8.49.10 ; 8.50.9) and
 Gośarpha (8.49.10 ; 8.50.10).

- Gave the house of son of Anu to Tr̥tsu, 7.18.13.
 „ Parābat's riches to Śarabha 8.100.6. Placed
 Atithigu's son in Gungui country (10.48.8).
14. Made Kutsa, Atithigva and Āyu subject to Suśravā:
 1.53.10.
 „ Turvasu and Jadu obedient to king Sudāsa:
 7.19.8.
 „ Tr̥tsu give his all to Sudāsa, grandson of Deva-
 jana, son of Pijavana, 7.18.15.
 „ Turvaśa obedient to King Sṛñjaya: 6.27.7.
 „ Br̥civats „ „ Devarāts: 6.27.7.
 „ Tugra and Sruadvi obedient to king Kutsa:
 10.49.4.
 „ Veśa obedient to King Āyū: 10.49.5.
 „ Śatgr̥bhi obedient to King Savya: 10.49.5.
 „ Sudāsa and Turvasa friends: 7.18.6; 7.19.8.
15. He became Menā, daughter of King Vṛṣaṇaśca
 (1.51.13). Drinks Soma from Sāryāta (1.51.12).
16. He became Vaikunṭha Indra, the son of Vikulā,
 as she prayed for a son like him (10.47).

In the R̥gveda the following hymns are addressed to
 Indra:

1:	3: 4.5.6.	169-170.	69.
	4-5.	173-178.	72.
	7-11.	2: 11-22.	7: 18-32.
	16.	36: 1 and 5.	41: 1.
	28-33.	41-43.	55: 3.
	51-56.	3: 30-54.	82-85.
	61-63.	4: 16-32.	93-94.
	80-84.	5: 29-40.	97-99: 4-6.
	100-104.	6: 17-29.	
	121.	32-47.	104. { 1-8.
	129-133.	60.	104. { 19-22.
			24.
	165.	68.	8: 1-4.

6	10 : 8	102-105.
12-17	19-6	111-113.
21	22-24	116.
24	27-29	119-120.
32-34	32-33	131.
36-40	38	133-134.
45-46	42-44	138.
49-55	47-50	144.
59	54-55	147-148.
61-66	86	152-153.
68-70	89	160-161.
76-82	93, 8	167.
88-93	96	177.
95-100	99	180.

In the following hymns Indra is invoked with other gods :

Indra and Varuṇa : 1.2.9 ; 1.17 ; 4.41 ; 4.42 ; 6.68 ; 7.82-85 ; 8.59.

Indra and Vāyu : 1.2.4-6 ; 4.46 ; 4.47.

„ „ Maruts : 1.6 ; 1.100 ; 1.101.

„ „ Agni : 1.21 ; 1.108-109 ; 3.12 ; 5.86 ; 6.59-6.60 ; 7.93-94.

„ „ Viṣṇu : 1.156 ; 6.68-69. 7.99.4-6.

„ „ Vṛhaṣpati : 4.49 ; 4.50 ; 7.97-98.

„ „ Puṣā : 6.57.

„ „ Soma : 6.72 ; 7.104 ; 8.1.

„ „ Vāstospati : 7.55.

The following hymns refer to the skill of Indra as a physician :

1.53.11 : Prayer to Indra for beautiful son and long life.

1.54.11 : „ „ „ „ „ „ food.

1.104.6 & 8 „ „ not to destroy embryo and infants.

1.165.15 }
 1.169.8 }
 1.175 } : Prayer to Indra for long life, strength and
 1.176.6 } good food.
 1.177.5 }
 1.178.5 }

4.41.6: Prayer to Indra for long life and power of procreation.

6.24.10: Prayer to Indra for long life (100 years), with sons and grandsons.

6.39.5: Prayer to Indra for water, herbs, non-poisonous trees, cows, horses and men.

8.1.12: Indra sutured the torn parts in the neck before the blood oozed out and even without any styptics.

8.40.12: Let Indra and Agni nourish us through the three humours (त्रिधातु)।

8.91: Apālā's prayer to Indra to remedy her baldness, etc.

10.161: Prayer to Indra to cure consumption.

R̥gveda, X. 161 Hymn :

God—Indra. R̥ṣi—Destruction of Phthisis.

1. O patient! I am releasing you from the unknown disease Phthisis, and Rāja Yakṣmā (King of Phthisis). Then you will live. O Indra and Agni! if the patient is under the influence of any evil planet, release him from such influence.

2. Even if this patients' span of life is shortened; or even if he is dead or is in a moribund condition, still I am bringing him back to life from Nir̥ṣṭi, the god of death, I have so touched him that he will live for one hundred years.

3. The oblation that I give, has one hundred eyes which grant one hundred years of life. I have brought him back by such oblations. May Indra protect him from all sins and grant him life for one hundred years.

4. O patient! Live for one hundred autumns, one hundred winters with ease and happiness, and one hundred springs. May Indra, Agni, Savitā and Vṛshaspati, satisfied with the oblations, grant him life for one hundred years.

5. O patient! I have hold on you. I have brought you round, you have returned rehabilitated. I have recovered your limbs, eyes and entire life.

The following epithets are applied to Indra in the R̥gveda :

Íśvara (1.26; 1.173.9; 6.23.10); Śatakratu (1.4.8-9; 1.5.8; 1.10.1; 1.16.9; 1.30.6 and 15; 1.51.2; 1.105.8); Sukratu (1.5.6); Suhantta Vajra (7.30.2); Sunāsika (1.9.3; 1.29.2; 1.81.4); Haryyaśva (3.31.3); Vṛtrahā (1.16.8); Maghavan (1.33.12 and 15; 1.102.7 1.133.3; 1.165.9); Meṣa (1.51.1; 1.52.1); Asura (1.54.3; 1.174.1); Suśípra (1.101.10); Medhyātithi (8.1.30); Puruhuta (1.176.3; 6.23.8); Íśāna (1.75.4); Purandara (6.32.3); and Śr̥ṅga-viṣa's son (8.17.13).

Formulae ascribed to Indra :—

Formulae.	Authors.	Books.	Pages.
1. Aindriya Rasāyana, I,	Suramapi	... C. S. VI, I.	323
2. " " II,	"	... " "	326
3. Sarvvato Bhadra ...	Surendra	... R. S. 8	406
4. Daśmūlādya Taila ...	Purandara	... G. N.	67
5. Haritakī Avaleha ...	"	"	115

1. AINDRIYA RASĀYANA, No. I.

ऐन्द्रिय रसायनम् ।

तद्वयथा—ऐन्द्री त्राक्षी पयस्या चीरपुष्पी श्रावणी महाश्रावणी शतावरी विदारो
जीवन्ती पुनर्नवा नामवला स्थिरा वचा च्छातिच्छवा मेदा महामेदा जीवनीयाशान्याः
पयसा प्रयुक्ताः । षण्मासात् परमायुर्वयस्य नरुणमनामयत् स्वरवर्णसम्पदमुपचयं
मेधां अतिमुत्तमवलनिष्ठायापरान् भावानावहन्ति सिद्धाः ॥

इतीन्द्रोक्तं रसायनम् ।

2. AINDRIYA RASĀYANA, No. II.

ऐन्द्रिय रसायनम् ।

वल्ग्रानां जीवनीयानां वृक्षणीयानांश्च या दश ।

वयसः स्थापनानाञ्च खदिरस्यासनस्य च ॥

खर्जुराणां मधूकानां मुस्तनामुत्पलस्य च ।

मूषीकानां विडङ्गानां वचायाश्चिवकस्य च ॥

शतावर्याः पयस्याः पिप्पल्या जीङ्गकस्य च ।

ऋद्ध्या नामवलायाश्च हरिद्राया धवस्य च ॥

विफलाकण्टकार्थीय विदार्याश्चन्दनस्य च ।

द्रक्षूणां शरमूलानां श्रीपण्यांस्तिनिशस्य च ॥

रसाः पृथक् पृथक् याज्ञाः पलाशचार एव च ।

एषां पलोन्मितान् भागान् पयो गव्यं चतुर्गुणम् ॥

हे पात्रे तिलतैलस्य हे च गव्यस्य सर्पिषः ।

तत् साध्यं सर्वमेकत्र सुमिश्रं खेहमुद्धरेत् ॥

तत्रामलकचूर्णानामादकं शतभाविताम् ।

स्वरसेनैव दातव्यं चौद्रस्याभिनवस्य च ॥

शर्कराचूर्णपावञ्च प्रस्थमेकं प्रदापयेत् ।

तुगाचीर्याः सपिप्पल्याः स्थाप्यं संसृष्टितच्च तत् ॥

शुची चेमार्त्तिके कुम्भे मासावर्षं द्रव्यभाविताम् ।

मावामग्निसमां तस्य तत ऊर्ध्वं प्रयोजयेत् ॥

देवतास्यप्रवालानामयसः स्फटिकस्य च ।
 मुक्तावेदूष्यशङ्खानां च गूणानां रजतस्य च ॥
 प्रक्षिप्य षोडशीं माचां विहायायासमैद्युनम् ।
 जीर्णं जीर्णं च भुञ्जीत षष्टिकं चौरसपिपा ॥
 सर्व्वरोगप्रशमनं हृष्यमायुष्यमुत्तमम् ।
 स त्वस्मृतिशरीराग्निबुद्धौन्द्रियबलप्रदम् ॥
 परमुज्ज्वलस्वरश्चेव वर्णस्वरकरं तथा ।
 विषालक्ष्मीप्रशमनं सर्व्ववाचोगतप्रदम् ॥
 सिद्धार्थतासाभिनवं वयस्य प्रजाप्रियत्वस्य यशस्य लोके ।
 प्रयोन्यमिच्छद्भिरिदं यथावद्रसायनं ब्राह्मसुदारबौध्यम् ॥
इतीन्द्रोक्तसंसायनमपरम् ।

3. SARVVATO BHADRA.

सर्व्वतोभद्रः ।

मृतं गन्धं तपनगणं कान्तलौहस्य चूर्णं ।
 कलंकखिन् हृद्यदि पिपितं शङ्खवेरस्य वारा ।
 युञ्ज्याद्रोगे यकृति गुदजे प्रीतिस्सर्व्वज्वरेषु ।
 शोथे पाण्डौ क्रिमिकृतगदे सर्व्वतः कामलायां ।
 कासे त्रासिच मेहे जठरज्वलगदे सर्व्वदोषपभृते ।
 ख्यातो योगः सुरमणिकृतः सर्व्वरोगैकहन्ता ॥

4. DAŚAMŪLĀDYA TAILA.

दशमूलाद्यं तैलम् ।

दशाङ्गुलं केशरारिष्टब्राह्मीपाठाकटुचिकैः ।
 शठौपुननं वामाग्नौ सुरसांस्त्रुफलत्रिकैः ॥
 शङ्खपुष्पौत्वगेलाकं मुनिपादपपङ्कजैः ।
 अङ्गोदवरुणास्त्रोतशिरीषकटभीफलैः ॥
 कृमिघ्नमूलशम्याकसर्षपामरदारुभिः ।
 प्रियङ्गुः क्षिप्रमग्निष्टासुसुखातन्दुलीयकैः ॥

गिरिजीर्णैवचाकुष्ठकङ्कुठरजनीहये ।
 मधुकसारसिन्धुत्वसितनीलोत्पलाम्बुदेः ॥
 कटतेलं समैरभिः पक्वं चौरि चतुर्गुणे ।
 सोन्मादं हृन्त्यपश्चारं पानाभ्यञ्जननावनेः ॥
 डाकिनौभूतवेतालनैगमेवादिकान् यद्वाहन् ।
 क्रत्याभिचाररक्षांसि नाशयत्यखिलात्मपि ॥
तेलमेतत्सुरेन्द्रेण नन्दस्य कथितं पुरा ।
 बालस्य किल रक्षार्थं विष्णोरमिततेजसः ॥
 अभ्यज्य सर्वगात्राणि भोक्तव्यं रिपुवैश्वरि ।
 वेलमभ्यञ्जनं श्रेष्ठं वसतोऽरातिसङ्कटे ॥
 अथ विलिप्तभगा भगशालिनी यदि रमेत नरं दिवसे शुभे ।
 मदनसायकजर्जरितोरसो भवति तस्य तथाऽपहृतं मनः ॥
 ताम्बूलसुखवासिषु व्यञ्जनाहारयोगतः ।
 अनामिकायसंयुक्तं वशीकरणमुत्तमम् ॥

5. HARĪTAKĪ AVALEHA.

हरीतकवल्लेहः ।

भार्गोजटापलशतं सलिलामृषाभ्यां
 युक्तं च मूलतुलया सङ्घितं विपाच्य ।
 पादस्थिते तु शतमव हरीतकौणां
 पक्तव्यमुज्ज्वलगुडस्य शतेन सार्धम् ॥
 छत्वार्य तव शिशिरे मधुनः पलानि
 चत्वारि च त्रिगुणितानि पलत्रयं च ।
 व्योषं दटित्वग्निभक्तेसरपवकाशा-
 मेषां पलं खण्ड्य निधेयमथोपयुज्य ॥
 आसं सकासमपि शोधमघातिहिक्का-
 मेकादिकं ज्वरमपौनसमुत्कटं च ।
इन्द्राद्रसायनमिदं हि पुरन्दरस्य
प्रीतं सङ्कलकरपुत्रमिषग्वराभ्याम् ॥

KĀRTIKEYA.

God Kārtikeya, son of Goddess Pārvatī is said to have written a work on medicine called Vāhaṭagrantha. This is a "treatise dealing with the methods of diagnosing diseases and with the preparation of different kinds of medicines for curing them. It is said to have been revealed by God Subrahmanya, son of Goddess Parvatī."

MSS. : No. 13176-7, G.O.M.L. (Madras).

Begins :—

वागीश्यासुमनसः * तं नमामि गजाननम् ॥

* * *

अस्य श्रीपार्वतीयस्य प्रियसुगुणोन्नतः ।

अस्यै रचिते चैव वाङ्मन्यसुतमम् ॥

वेद्याणां यशसेऽर्चाय व्याधिताणां हिताय च

धत्ते धन्वन्तरिप्रोक्तं तमस्सुहृदये यथा ॥

Colophon :

इति—श्रीगौरीपुत्रकामिनीयविरचिते वाङ्मन्ये निदानयोगो नाम प्रथमः
परिच्छेदः ॥

The MS. No. 13177 contains the following Chapters :—

- | | |
|-------------------|-------------------------|
| १। निदान योगः । | ६। लिङ्गवर्ग समाप्तिः । |
| २। अथाय यागः । | ७। पुरुषवटका योगः । |
| ३। पथ्यापथ्य योगः | ८। औषधयोगः । |
| ४। तैलयोगः । | ९। रसयोगः । |
| ५। घृतयोगः । | |

SARASVATĪ.

Sarasvatī, the goddess of learning in later literature, is not of very great importance in the R̥gveda. She is celebrated both as a river and as a goddess (तव सरस्वती इति एतस्य नदीवद्देवतावच्च निगमा भवन्ति । Yāska. Nir. ii. 23). Sāyaṇa also refers to the dual nature of the deity (द्विविधा हि सरस्वती विष्णुवद्देवता नदीरूपा च). As a river see R̥gveda i. 3. 12.; vi. 52. 6; 61. 2. 8. 10. 13; vii. 36. 6; 95. 1; x. 17. 10. 1.—(Vaj. S. 4. 2; Atharva Veda vi. 51. 2); 30. 12; 64. 9; 75. 5. The river Sarasvatī, which is now a narrow stream losing its way in the Rajputana desert, is described in vii. 95. 2, as a mighty river rising from the Himalayas and falling down into the sea. King Citra and others are said to have dwelt on or near the Sarasvatī. As a goddess she is said to be the consort of Sarasvān Deva (vii. 96. 4-6) and is invoked for wives and offspring, also for plenty and protection. [See also v. 43. 11; vi. 49. 7; 61. 11.] She is described as white in colour (vii. 95. 6; 96. 2.). From her two prolific breasts, which are said to be truth and falsehood (Ait. Br., iv. 1), the worshippers suck prosperity and riches (i. 89. 3; 164. 49). As a river nymph, she is further described as a support and a fortress (vii. 95. 1), and as bestowing wealth, fatness, and fertility (vii. 95. 2). See also ii. 41. 16; vi. 61. 14. In vi. 61. 1, she is represented as having given to Vadhryaśva a son, Divodāsa by name. (See also i. 3. 10. 11; 89. 3; 164. 49; ii. 3. 8; 30. 8; vi. 49. 7; 61. 3. 4. 7; viii. 21. 17; ix. 67. 32; x. 17. 8. 9). She is described as the receptacle of all the powers of life and the bestower of offspring (ii. 41. 17); and in

x. 184. 2, she is associated with the deities who assist procreation (गर्भं धेहि सरस्वती).

"In *R̥gveda* x. 131. 5 (=Vāj. S. x. 34) where the *Aśvins* are said to have defended Indra, *Sarasvatī* is declared to have waited upon him. And in Vāj. S. xix. 12 it is said: 'The gods celebrated a healing sacrifice; the *Aśvins* physicians, and *Sarasvatī* too a physician, through speech, communicated vigour to Indra.' The *Aśvins* and *Sarasvatī* are also connected with each other in Vāj. S. xix. 12, 15, 18, 34, 80-83, 88-90, 93-95; xx. 56-69, 73-76, 90. In xix. 94, it is said that '*Sarasvatī*, wife of the *Aśvins*, holds a well-formed embryo in her womb.'¹

In the *R̥gveda* she is not identified with *Vāch*, who is said to be the wife of Indra (ii. 8. 8. 4), but in the later mythologies she became the goddess of learning, speech and eloquence and the spouse of *Brahmā*, and is invoked as a muse. As goddess of learning, her reputation is shared by two other goddesses; and according to *Sāyaṇa*,² *Bhāratī* is the goddess of learning in heaven, *Ilā* is the terrestrial goddess, and *Sarasvatī*, the goddess of the aerial regions. *Sarasvatī* is identified with *Agni*, and the three goddesses *Ilā*, *Sarasvatī* and *Bhāratī* refer to *Agni* (i. 13. 9; 142. 9; 118. 8; ii. 1. 11). In the *Mahābhārata* (*Sāntiparva*, v. 12920) she is called the mother of the Vedas, and in v. 6811, the celestial goddess is described as produced from heaven. In *Taitt. Br.*, ii. 8. 8. 5. she is said to be the wife of Indra and to be the deity sought after by the *Ṛṣis* who composed the Vedic hymns.

¹ Muir's Texts, Vol. V, p. 342.

² "भरतः आदित्यः । तस्य सम्बन्धिनी भारति । तादृशीद्युर्लोकदेवते । ऐश्वर्ये मूदेवे । ऐ सरस्वति । सरोवाक् उदकं वा तपति अन्नरीचदेवता ।"

Sāyaṇa : Commentary, i. 188. 8.

Formulæ attributed to Sarasvatī :—

1. Sārasvat Ghṛta : an oleogenous medicine to cure sterility in women and seminal insufficiency in men.

अमृताणां च नारीणां नराणां स्वस्वरितसां ।

घृतं सारस्वतं नाम सारस्वत्या विनिर्मितं ॥

End of Maṇḍūkabrahmikalpa.

G.O.M.L. xxiii, No. 13184.

2. Sārasvat Ghṛta : In the Bower MSS., p. 39, a formula for the clarified butter of Sarasvatī is given. By its use, a man attains memory and intelligence. It cures stammering and dumbness.

SĀRASVAT GHṚTA

सारस्वतम् घृतम् ।

आजम् पयः शङ्खविरम् वचा शिथुर्हतीतकौ ।

पिप्पल्यो मरिचम् पाठा सैन्धवन्दशमम् घृतम् ॥

शङ्खवेरादयो भागा खवण्ताः पल्लौनखाः ।

चतुर्गुणेन पयसा घृतप्रस्रवं विपाचयेत् ॥

अस्योपयोगाद्दिनैतं रश्मिन् मेधाश्च मानवः ।

यद्गदगदमङ्गं पानाद्वास्थशाम्यति ॥

The following hymns are addressed to Sarasvatī in the R̥gveda

i. 3. 10 : May Sarasvatī, the purifier, like our sacrifices.

11 : Sarasvatī, the generator of true words and the teacher of pious men, hath accepted our offerings.

- 12 : Sarasvatī as she flows hath produced a copious flood and has stimulated all knowledge.
- 9 : May Ilā, Sarasvatī and Mahī, the three goddesses take their seats on the Kuśa grass.
89. 3 : May the gracious Sarasvatī bestow riches and happiness on us.
142. 9 : May Hotrā, Bhārati, Ilā, Sarasvatī, and Mahī sit on the Kuśa grass.
164. 49 : Her two prolific breasts are said to be the source of all prosperity, riches and happiness.
188. 8 : Prayer to Bhārati, Sarasvatī and Ilā for prosperity.
- ii. 1. 11 : Hotrā, Bhārati, Ilā and Sarasvatī, the slayer of Vṛtra, are identified with Agni
3. 8 : May Sarasvatī, Ilā and Bhārati remain in our sacrificial altar, perfect our hymns and preserve the sacrifices.
30. 8 : O Sarasvatī ! protect us. With the help of Maruts conquer our enemies. Indra killed the chief of the proud Śāṇḍikās.
32. 8 : Sarasvatī is prayed for with the goddesses Sinivālī, Rākā, Guṇīgu for procreation, and Indrāṇi and Varuṇāṇi for protection.
41. 16 : Prayer to Sarasvatī : She is the best of mothers, best of rivers and best of goddesses.
- 17 : O Sarasvatī ! you are resplendent. Food is dependent on you. You feel happy by drinking Soma juice from the Śunahotras. O Goddess ! grant us offspring.
- 18 : O Sarasvatī, the source of food and water ! accept the oblations of the Gṛtsamadaś.
- iii. 4. 8 : May Bhārati, Ilā and Sarasvatī with the Sārasvatas sit on the Kuśa grass.

54. 13 : May Maruts and Sarasvatī hear our prayers and grant us progeny.
- v. 5. 8 : May Ilā, Sarasvatī and Mahī sit on the Kuṣa grass.
42. 12 : May the rivers, Sarasvatī and divine Rākā desire to bestow riches on us.
43. 11 : May the goddess Sarasvatī come down from the sky to our sacrifice. May she be pleased with our hymns, and may she send us rain.
- vi. 49. 7 : May the beautiful heroine Sarasvatī, the purifier, and of wondrous gait, perfect our sacrifice. May she be pleased to give her worshippers a strongly built house and happiness.
52. 6 : May Indra and watery Sarasvatī be near us for our protection.
61. 1 : She gave Vadhryaśva a son and killed Pani.
 2 : She is breaking the bases of mountains with her torrents.
 3 : You have killed the son of Vṛṣaya and other haters of gods
 4 : May she satisfy us with food and riches.
61. 5 : You save men who wage war for riches, if they pray you.
 6 : Protect us in war and like Puṣā, bestow riches on us.
 7 : May the terrible sarasvatī in her golden chariot desire to hear our prayer.
 8 : Her powerful torrents flow with sound.
 9 : May she conquer our enemies and bring her watery sisters.
 10 : May we always adore Sarasvatī with her seven sisters.

- 11 : She fills the terrestrial and aerial regions
with her radiance; may she protect us
from our culminators.
- 12 : May she be fit for prayer in every war.
- 13 : She is the swiftest of all rivers, she is the
object of adoration by the wise.
- 14 : O Sarasvatī ! lead us to riches. Do not
make us mean. Do not harass us with
floods. Accept our friendship and our house.
May we be not removed from you to
strange regions.
- vii. 35. 11 : May Sarasvatī grant us peace.
36. 6 : Sindhu, the mother of rivers, and the seventh
river Sarasvatī, swollen with water, are
flowing.
95. 1 : Sarasvatī, full of water, is running freely.
2 : She runs from mountain to ocean, bestowing
wealth and fertility; she gave Nahuṣa
butter and milk.
- 3 : Sārasvān, grants his worshippers powerful
sons and rehabilitates their bodies.
- 4 : She is rich and always kind to her friends.
May she hear our songs in the sacrifice.
- 5 : May we be united with you for protection.
- 6 : O white Goddess ! bestow on the worshippers
food, and rear us with your benediction.
- 96 1 : O Vasiṣṭha ! sing songs in prayer to
Sarasvatī.
- 2 : O white Sarasvatī ! men get food and
riches from you.
- 3 : May she do us good and stimulate our
intellect.

- 4: We want wife and sons; we adore Sārasvān Deva.
- 5: O Sārasvān! protect us by your water.
- 6: May we get sons and food from him.
- viii. 21. 17: Has Indra given me these riches? Has the fortunate Sarasvatī given me? Or O Citra! you have given me.
- 18: King Citra who lived on the banks of Sarasvatī gave us enormous riches.
- ix. 5. 8: May Bhārati, Sarasvatī and Ilā come at the sacrifice.
67. 32: He who reads these *ślokas* gets from Sarasvatī clarified butter, milk and water.
81. 4: May the well-formed Sarasvatī come here with Puṣā, Mitra, Varuṇa, Maruts, and Aśvins.
- x. 19. 7: May Sarasvatī fulfil the desires of the charitable men.
- 8: Sarasvatī drives with our forefathers in the same chariot. May she grant us food and freedom from disease.
- 9: May you bestow the worshipper food and riches in large quantities.
- 10: The waters are like our mother, may the water cleanse us. I am coming out of the water pure and free from sin.
30. 12: O Waters! complete this beneficial sacrifice. Be the protector of sons and riches. May Sarasvatī grant food to the poet.
64. 9: May Sarasvatī, Sarayu and Sindhu rivers come to protect us. Like mothers, may these goddesses give us water, sweet as honey, and unctuous and nourishing as clarified butter.

65. 1 : Sarasvatī is mentioned with other gods, Indra, Varuṇa, Rudra, Viṣṇu, etc., as united together.
- 13 : May Sarasvatī, with whom are linked various ideas and thoughts, hear my words.
75. 5 : O Ganges ! O Yamunā, Sarasvatī, Śatadru (Sutlej) and Paruṣṇi (Irāvati) ! divide among yourselves the psalms uttered by me.
110. 8 : May Bhārati, Ilā and Sarasvatī come and sit on the Kuṣa grass.
131. 5 : Sarasvatī is said to have waited upon Indra (Vaj. S. x. 34) when he was rescued by Aśvins.
141. 5 : Pray Aryyamā, Indra, Viṣṇu, and Sarasvatī for food.
184. 2 : O Sinivāli, O Sarasvatī ! hold the embryo. May Aśvins produce a foetus
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RĀKĀ, SINĪVĀLĪ, GUṆGU, AND ANUMATI.

Rākā (ii. 32. 4. 5. 8; v. 42. 12), Sinivālī (ii. 32.6; x. 184. 2), Guṅgū (whom Sāyaṇa, in ii. 32. 8. identifies with Kuhū) and Anumati are four goddesses, besides Sarasvatī, mentioned in the R̥gveda in connection with medicine. "Sāyaṇa says : Rākā is the full moon (ii. 32. 4) but she is closely connected with parturition, as she is asked to 'sew the work' (apparently the formation of the embryo) 'with an unfailing needle,' and to bestow a son with abundant wealth (ii. 32. 4). Sinivālī and Kuhū are (as we are told by Yāska, Nir. xi. 31) wives of the gods according to the mythologists (nairuktāḥ) and the two nights of the new moon (amāvāsyē) according to the ritualists (वाजिकाः). Sinivālī being the earlier, and Kuhū the later. Sinivālī however is also connected with parturition, being called वृद्धका, 'the broad-loined' (or 'bushy-haired'), बहुसूत्री, 'the prolific,' सुबाहु, 'the handsome-armed,' सुहृदि, "the handsome-fingered," being supplicated for progeny ii. 32. 6.7 (प्रजाम् देवी दिदिष्टि नः), and asked to bestow pregnancy, x. 184, 2 (गर्भम् वेहि सिनिवाली); A. V. v. 25. 3; vi. 11. 3. Yāska quotes from the Taitt. Br., iii. 3. 11, a verse regarding Kuhū, whose name does not occur in the R̥g-veda. See also the account of Anumati in Böhtlingk and Roth's *Lexicon*, s.v." ¹

"In a hymn to Anumati (according to Professor Roth the goddess of good will, as well as of procreation), A. V. vii. 20, she is thus identified with all things (verse 6) : 'Anumati was all this universe, whatever stands or walks, and everything that moves. May we, O goddess,

¹ Muir Texts, Vol. V, p. 346. See also Weber's *Ind. Stud.* v. 228 ff and 237.

RĀKĀ, SINIVĀLĪ, GUṆGU, AND ANUMATI 121

enjoy thy benevolence; for thou, Anumati, dost favour us.”¹

The following hymns in the R̥gveda are addressed to the goddesses:

- ii. 32. 4: May auspicious Rākā hear. May she sew her work with an infallible needle, and grant us wealthy and heroic sons.
- 5: May gracious Rākā approach us to-day. She nourishes us with thousand blessings.
- 6: Wide-hipped Sinivālī, the sister of the gods, grant us progeny. (=Y.V., 34. 10).
- 7: Sinivālī is said to have beautiful arms, nice fingers, many children, and to have delivered many women easily.
- 8: I invoke Guṇgu, Sinivālī, Rākā, Sarasvatī; Indrāṇī and Varuṇāṇī for welfare.

v. 42. 12: See p. 116.

x. 184. 2: See p. 119.

¹ Maier: Sanskrit Text, Vol. V, p. 398.

CHAPTER III

DAKṢA

Dakṣa sprang from Aditi, and Aditi came forth from Dakṣa. After her the gods came into being, (x. 72. 4. 5). Certain luminous gods are said to be the sons or descendants of Dakṣa, (vi. 50. 2). Roth (Illus. of Nirukta, p. 51) interprets Dakṣa as the spiritual force and Aditi as the spaces. Dakṣa's wife is Prasuti, the mother of Satī who married Śiva. Dakṣa celebrated the famous sacrifice, the Dakṣa-Yajña, in which all the gods except Śiva were invited. To punish her father, Satī went to the sacrifice, and when Dakṣa proceeded with his Yajña without Śiva, she gave up her life. To avenge her death, Śiva sent Virbhadrā; and a struggle ensued, in which Dakṣa's head was severed from his body. It was afterwards substituted by a goat's head, when Śiva's wrath was pacified by prayer. The sacrifice was completed with a share assigned to Śiva. In iii. 27. 10, Ilā is the daughter of Dakṣa; she married Rudra.

Dakṣa is called the Prajāpati, *i. e.*, the creator of living beings. He is one of the Ādityas (ii. 27. 1) who were six (ii. 27. 1) or seven (ix. 114) or eight (x. 72. 8) in number in the R̥gveda but more in later literature (Śatap. Br., ii. 6. 3. 8; Mbh., Ādiparva, 121). Brahmā taught him the Science of Medicine. Dakṣa was the teacher of the two Aśvins, the twin sons of the sun.

ब्रह्मा प्रोवाच ततः प्रजापतिरधिजगे तस्मादग्निनावशिभ्यामिन्द्र इन्द्रादहं मेयात्विह
प्रदेयमग्निभ्यः प्रजाहितृतेतोः ।

Suśruta Saṁhitā, I. i.

ब्रह्मा स्वत्वायुषी वेदं प्रजापतिमजियहत् ।

सोऽग्निनी तौ सहस्राक्षं सोऽविपुवादिकान् मुनीन् ॥

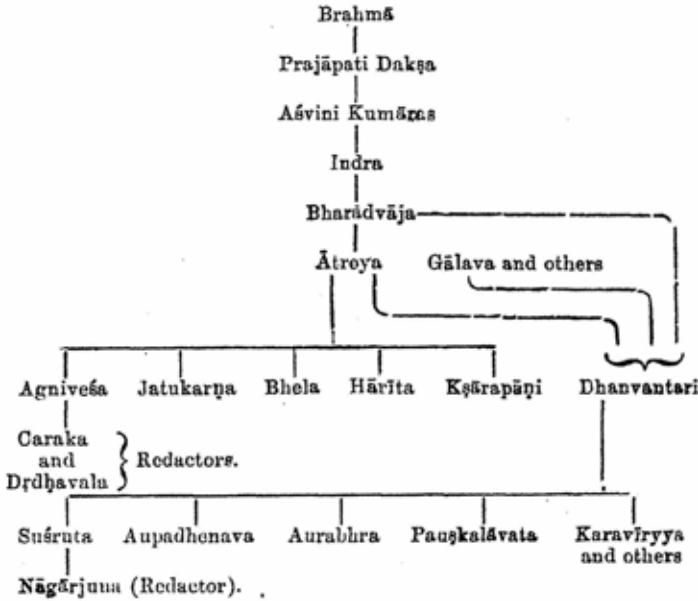
Astāṅga Hṛdaya Saṁhitā, I. i.

विधाताऽयं सर्वस्वमायुर्वेदं प्रकाशयन् ।
 स्वनाम्ना संहितां चक्रे लघुश्लोकमयीं सुलुम् ।
 ततः प्रजापतिं दक्षं दक्षं सकल कर्मसु ॥
 विधिधीर्निरधि साङ्गमायुर्वेदमुपदिशत् ॥
 अथ दक्षः-क्रियादक्षः सर्व्वेयौ वेदमायुषः ।
 वेदयामास विद्वांसौ सूर्याङ्गौ सरसचमी ॥

Bhāva Prakāśa, I. i.

See also Caraka Saṁhitā, I. i.

GENEALOGY OF THE TEACHERS OF MEDICINE.



The resemblance of Æsculapius (the reputed son of Apollo) and his two sons Machaon and Podalarius, to Dakṣa, the preceptor of the two Aśvins, the offspring of the sun, who after learning the Āyurveda from their father became the medical attendants of the gods, is no doubt very remarkable.

Formulæ attributed to Dakṣa :—

I. Mahārāśnādikvātha—Prajāpati—B. P., II, ii, p. 587.

1. MAHĀRĀŚNĀDI KVĀTHA.

महाराक्षादि काथः ।

राक्षावातारिमूलञ्च वासकञ्च दुरालभम् ।
 सटीदारुवलासुक्तागारातिविषाभयाः ।
 अदंष्ट्राव्याधिघातश्च मिमिधान्यपुनर्नवाः ।
 अश्वगन्ध्यास्तक्रुष्णा हृद्ददारशतावरौ ।
 वचा सहचरयै व चविकाहृत्तीक्ष्णम् ।
 समभागान्वितैरेते राक्षादिगुणभागिकैः ।
 कषायं पाययेत् सिद्धमष्टभागावशेषितम् ।
 शुण्ठीचूर्णसमायुक्तमाभायेन घृतं तथा ।
 अलम्बुषादिसंयुक्तमजमोदादिसंयुतम् ।
 यथादोषं यथाव्याधिं प्रक्षेपं कारयेत् भिषक् ।
 सर्वेषु वातरोगेषु सन्धिमज्जगतेषु च ।
 आनाहृषु च सर्वेषु सर्वगातानुकम्पते ।
 कुत्रके वामने चैव पचाघाते तथाहृते ।
 जानुजङ्घास्थिपीडासु श्लेष्मणां च हनुगृहे ।
 प्रशस्तं वातरक्ते स्वाद्रूक्षस्थे तथाशंसि ।
 विश्वचौगुल्फद्रोगविसूक्ष्मौक्तीश्रीर्षके ।
 अन्तर्हृत्तौ श्लेष्मिपदे च योनिशुक्रामये तथा ।
 पुंसां मीढ्रगते रोगे स्त्रीणां बन्ध्यामये तथा ।
 योषितां गर्भदं मुख्यं नास्ति किञ्चिदतः परम् ।
 सर्वेषां पाचनानानु श्रेष्ठमेतद्धि पाचनम् ।
 महाराक्षादिकं नाम प्रजापतिविनिर्मितम् ॥

इति महाराक्षादि काथः ।

YAMA

Yama or the Indian Pluto in the Veda is the god and ruler of the dead. He is the son of Vivasvat (Rv., ix. 113. 8; x. 14. 1 (=Av., viii. 2. 11; xviii. 1. 49); x. 14. 5; 58. 1; 60. 10) and Saṇyū, the immortal daughter of Tvaṣṭa (Rv., x. 17. 1. 2). He is said to have been one of the original pair of human beings (x. 10. 2) and to have sprung from the Gandharva, a deity of the atmosphere, and his wife Āpyāyoni (x. 10. 4). In the same hymn to perpetuate the human race, his twin sister is said to have requested him for cohabitation. But he is declared to have resisted the solicitations of his twin sister Yamī or Yamunā to form a sexual union with her for the continuation of the species (Roth, Journ. German Orient. Soc., iii. 335; iv. 426; Illustr. of Nirukta, p. 188). He was the first of mortals who died and discovered the way to the other world; he guides other men thither, and assembles them in a home for ever (x. 14. 1. 2; Av., vi. 28, 3; xviii. 1. 49. 50; 3. 13). In the Taitt. S., vi. 1. 4. 3, it is said: "The gods and Yama contended in this world. Yama took away the vigour and energy of the gods. This is his characteristic. The gods reflected, 'Yama has become the same as we are.' Müller thinks that Yama's character is solar. Sun also is the son of Vivasvat and like Yama he is sometimes considered as sending death (Rv., viii. 67. 20: see also Av., xix. 9. 7; xviii. 3, 62); he is sometimes spoken of as preserving from Yama (Rv., i. 116. 2; vii. 33. 9; ix. 68. 3. 5; x. 12. 6; 13. 2. 4; 53. 3; 64. 3; 123. 6). In Śatap. Brāhma., 109, Yama is identified with the sun (xiv, 1, 3, 4); but he is, a little further on (xiv, 2, 2, 11) similarly identified with Vāyu.

Max Müller understands Vivasvat to represent the sky, Saranyu the dawn, Yama originally the day, and Yami, the twin sister, the night. They are identified by some with the first human pair; and another hymn says that he "was the first of man that died." He had two dogs as his messengers (Av., v. 30. 6; viii. 1. 9; 2. 11; 8. 10); one of them is said to be black and the other spotted (x. 14. 10-12). In i. 29. 3, his two female messengers are referred to, and Indra is prayed to cast them asleep. In x. 165. 4 and Av., vi. 28. 3, Yama is identified with death and a bird is said to be the herald of approaching death of animals.

In the *R̥gveda* Yama is nowhere represented as the punisher of the wicked, an idea very much dilated upon in later times. But his insatiable dogs are no doubt objects of terror, and in x. 97. 16, deliverance is prayed from the bonds of Yama and Varuṇa.

In the *Mahābhārata* he is the son of Sun by Samjñā, and the brother of Vaivasvata Manu, and mythologically, the father of Yudhiṣṭhira. He is the judge of the dead. For the Pauranic legend of Yama and his step-mother Chāyā, see page 84.

In the Vedic hymns, Yama is never said to have been a physician. He sends death and is the King of the departed. In his abode, the virtuous enjoy blessedness after death.

According to Barnouf, the powerful King Jamsid, Ferudin and Garsaspa as mentioned by the celebrated Persian poet Firdusi are the same as Yim, Thratelyana and Keresaspa of the *Zend Avesta*; and these names are again to be traced to the *R̥gvedic* gods: Yama, Traitana and Kṛśaśva.

Books—

Jñānārṇava: Yamarāja is said to have written a book on medicine called *Jñānārṇava* (or the Sea of

Knowledge). It is mentioned in the *Brahmavaivarta Purāṇa*. There is also a *Dharma Sāstra* which bears the name of Yama as its author.

Hymns relating to Yama in the *R̥gveda* :—

x. 10, 1-14; 14, 1-16 (=Av., xviii. 1, 49; Nir. x. 20) 15. 1. (=V.S., 19. 49; Nir., 11. 18); 17. 12.

x. 10. 1-14: The famous hymn by Yama and his sister Yamī in the form of a dialogue about cohabitation between brothers and sisters.

14. 1. Adore Yama, the son of Vivasvān. He takes the pious to the happy land. All men go to him.

2. Yama points out the way in which our forefathers went.

3. Yama is magnified by the help of the *Āṅgirās* as Indra by the *Kavyas*.

4. O Yama! take your seat with the *Āṅgirās* in this sacrifice.

5. Come with the *Āṅgirās*. We invoke Vivasvat, your father.

6. Our forefathers *Āṅgirā*, *Atharvans* and *Bhṛgu* have come; may they bless us.

7. You go to the way of our forefathers; go to King Yama and Varuṇa.

8. Go to heaven and live in the company of our forefathers and Yama. Leave evil there and return home.

9. Yama has fixed this cremation ground for the dead.

10. Pass by the two dogs in haste and live in company of the fathers and Yama.

11. O Yama, protect this dead man from your dogs who guard the way. O King! make him fortunate and free from disease.

12. Those two insatiable messengers have big noses ;
may they give us strength : may we see
the sun.
 13. Prepare Soma for Yama, and for him make
oblations. The sacrifice goes towards him.
 14. Adore Yama ; may he grant us long life.
 15. Offer oblations for Yama. We adore the sages
who showed us the right path.
 16. Yama gets Trikadrūka sacrifices.
 17. 1 : The god Tvaṣṭā gave her daughter in marriage.
When Yama's mother was married, the wife
of Vivasvān disappeared.
 2. The immortal Saranyu was concealed from men,
and a lady like her was given to Vivasvān ;
she conceived the two Aśvins ; and Saranyu
gave birth to twins.
-

VARUṆA.

Varuṇa, the son of Aditi (i, 24, 15), the god of the ocean in later mythology, is not so described in the R̥gveda. He rather occupies a more conspicuous place but his connection with water can distinctly be traced in the Vedic literature (R̥v., i, 161, 14; ii, 28, 5; vii, 49, 2-4; 64, 2; viii, 41, 8; 58, 12; ix, 90, 2; V. S., x, 7; Av., iii, 2, 3; iv, 15, 12; 16, 3; v, 24, 4; vii, 83, 1). He is frequently associated with Mitra in the hymns of the R̥gveda as the ruler of earth and skies (v, 62, 3; 63, 7; 67, 5; 69, 1, 4; vii, 61, 4; x, 102, 2); as the guardians of the world (ii, 27, 4; v, 62, 9; vii, 51, 2; viii, 25, 1; x, 126, 4); as martial gods (i, 25, 5; 124, 6; 136, 1; v, 66, 2; 67, 1; 68, 1, 3; vi, 49, 1; 51, 10; 67, 5, 6; viii, 84, 11; 64, 2; viii, 25, 8; 56, 1; 90, 2); as Rudra, the terrible (v, 70, 2, 37); as Asura, the divine (viii, 25, 14; 27, 20; 36, 2; vii, 65, 2); and as the universal monarch (i, 71, 9; 136, 14; 137, 1; v, 62, 6; 63, 2, 3, 5; 65, 2; 68, 2; vii, 64, 2; viii, 23, 30; 25, 4, 7, 8; 90, 2; x, 65, 5). They are described as the righteous (i, 2, 8; 23, 15; 36, 4; ii, 27, 4; v, 63, 1; 65, 2; 67, 4; vii, 64, 2; 66, 13; viii, 23, 30; 25, 8), the lords of truth (i, 23, 5) and haters of falsehood (i, 152, 1; ii, 27, 4; vii, 60, 5; 66, 13). They discharge the rain (v, 62, 3), cause the sky to shine (x, 65, 5) and help the foolish to be wise (vii, 60, 6, 7).

Varuṇa is also separately magnified many times, (ii, 27; 28; v, 85; vii, 86; viii, 27, 7; 41; 42, 1-2; x, 61, 26), but Mitra only once (iii, 59). Sāyaṇa expresses the opinion that Mitra is the god of the day (i, 89, 3) and Varuṇa is the setting sun (vii, 87, 1;—Sāyaṇa¹) or the god of the night

¹ मेरुं वे अहरिति युयते: युयते च वावरी रात्री ।

Sāyaṇa.

(Taitt. Br., i, 7, 10; Taitt. Sam., i, 18, 16; ii, 1, 7, 4; vi, 4, 8). According to Śatapatha Br., this earth is Mitra and the heaven is Varuṇa. The Vedic Mitra is identified with the Mithra (Windischman) and the Asura Varuṇa with the Ahura Mazda (Roth) or Varena (Westergaad) of the Zend Avesta. The Varuṇa corresponds in name to the Uranos of the Greeks.

Varuṇa is sometimes said to be visible to the worshippers (i, 25, 18; vii, 88, 2) in this world, and in the next he and Yama shall be beheld by the pious after death (x, 14, 7). He is said to be the highest god of the Aryan races (Jour. Germ. Or. Soc., vi, 71)

The far sighted (i, 25, 5, 16; viii, 90, 2), thousand-eyed (vii, 34, 10) Varuṇa lived in a house which had thousand doors (vii, 88, 5) and thousand columns (ii, 41, 5; v, 62, 6). Dressed in golden mail (i, 25, 13), and seated in his chariot drawn by horses (v, 62, 8), Varuṇa beholds all things around him (v, 62, 4, 8; 63, 1). His golden-winged messengers (i, 25; x, 123, 6) behold both worlds (i, 24, 13; vi, 67, 5; vii, 87, 13). The sun-eyed (vii, 66, 10; 61, 1; 63, 1; x, 37, 1) and beautiful-handed god is the King or King of kings (i, 24, 7, 8; 25, 10; ii, 27, 10; 28, 1, 6; iv, 1, 2; v, 40, 7; 85, 1, 3; vi, 68, 9; vii, 42, 1; 64, 1; 87, 6; x, 103, 9; 132, 4; 173, 5). He is the source of knowledge and dwells everywhere as a ruler (v, 85, 2; vi, 70, 1; vii, 86, 1; 87, 5, 6; viii, 41, 4, 5, 10; 42, 1; 87, 5). Wind is his breath (vii, 87, 2). Rivers flow by his command (i, 24, 8; ii, 28, 4; vii, 87, 1). The moon and stars obey him (i, 24, 10) and he opens out paths for the sun (vii, 70, 4). He knows the flight of birds in sky, the path of ships in ocean, and the course of wind (i, 25, 7), but he is unknown to birds and the rivers (i, 24, 6). His laws are fixed (i, 25, 6, 10; 44, 14; 141, 9; ii, 1, 4; 28, 8; iii, 54, 18; viii, 25, 2). He instructs

Vaśiṣṭha in mysteries (vii, 87, 4), who claims his friendship (viii, 88, 4), implores his forgiveness and entreats for his life. He is the possessor of divine wisdom or māyā (iii, 61, 7 ; v, 63, 3, 4, 7 ; vi, 48, 14 ; vii, 28, 4 ; x, 99, 10 ; 147, 5).

Varuṇa is said to have a hundred, a thousand medicines as remedial agents (i, 24, 9), and he is the guardian of immortality (viii, 42, 2). He is prayed for to drive away evil and sin (i, 24, 9 ; v, 85, 7, 8), to prolong life (i, 24, 11 ; 25, 12) and spare the lives of transgressors of his laws (i, 25, 1), though they are liable to punishment by his noose (i, 24, 5 ; 25, 21 ; vi, 74, 4 ; vii, 65, 3 ; 84, 2 ; x, 85, 24 ; Av., iv, 16, 6). "From dire disease preserve us free" is the prayer of the Vedic Ṛṣi to Varuṇa. It is said that he, who constantly sings the hymn 'Uduttamaṁ Varuṇa pāśam' never suffers from any disease. He gets himself cured of disease, if he recites this sāma :

उदुत्तमं वरुणपाशमिवेतत् सदा प्रयुञ्जानः सम्बाधं न निगच्छति निगतस्य प्रमुच्यते ।

Sāmavidhāna Brāhmana; II. I.

Ea or Oannes was the earliest (5,000 B. C.) known Sumerian deity associated with the art of healing. He was called the "Lord of the Deep." "He arose from the sea and instructed the people in science and learning." As god of the sea, he is credited with certain healing powers, from which the sick may derive benefit by bathing in the sea. His son Marduck, the chief Babylonian deity of healing was believed to give health and to punish men with disease through the medium of the heavenly bodies. He is said to afflict the guilty with dropsy. The following verses refer to the power of the god to inflict disease on the guilty and to restore the dead to life :

"O Marduck, thou art glorious among great gods,
No will is greater than thine,

Thou canst inflict upon the guilty one
 A dropsy which no incantation can cure,
 Thou art the marvellous one who taketh pleasure
 In raising the dead to life (*i.e.*, the healing of the sick)
 Marvellous one who hath power to give life
 By thy spells the sick are restored."

In the *R̥gveda*, i, 24, Varuṇa is described as giver of long life. In vii, 86-89, the short final hymn alludes to the power of Varuṇa to cure dropsy. Varuṇa as a water-god inflicts on man dropsy as a punishment for their sin. (*Cf.* the story of Dogstail Śunaśepha, wherein King Hariścandra is said to have been attacked with the disease.)

The idea that dropsy was caused by the wrath of Varuna might have originated from the common belief still prevalent in India, and once fully believed in England, that "dropsy could be caused by drinking too much water and that a patient suffering from dropsy contracted the distemper by drinking too much water."¹

The following epithets are applied to Varuṇa in the *R̥gveda* :

Asura (i, 24, 14 ; ii, 28, 7 ; 27, 10 ; iv, 63, 3, 7 ; v, 85, 5).

Praceta (i, 24, 14).

Āditya (v. 69, 4).

Rudra (v. 70, 2).

Sukṣatra (vii, 89, 1-4).

Deva (vii, 60, 52 ; 61, 7 ; viii, 42, 3).

Rājā (vii, 89, 1).

Kṣatriya (vii, 64, 2).

¹ B. M. J., 1888, Vol. II, p. 1275-6.

In the following hymns Varuna is invoked with other god in the R̥gveda :

Indra and Varuṇa : see p. 105.

Mitra and Varuṇa : i, 129, 3 ; 136 ; 137 ; 151 ; 152 ; 153 ; iii, 62, 16-18 ; v, 41, 1 ; 52, 14 ; 62 ; 63-72 ; vi, 67 ; vii, 40, 2 ; 50, 1 ; 52, 2 ; 60, 5-12 ; 61 ; 62 ; 63, 5, 6 ; 64 ; 65 ; 66, 1-13 ; viii, 29, 9, 10 ; 47, 1 ; 101 ; x, 61, 25 ; 132.

THE ASVINI KUMĀRA.

In the R̥gveda the Aśvins are described as the twin sons of Vivasvat and Saranyu (x, 17. 2). They are also called the sons of sky (i. 7, 12; 84, 1; 182, 1; x. 61, 4) or the offspring of the ocean (i, 46, 2). Uṣā is their sister (i, 180, 2) and Urjāni (i, 119, 2) or Sūryā, the daughter of the sun, their wife (i, 116. 17; 117, 13; 118, 5; 119, 5; iv, 40. 6; v, 73, 5; vi, 63, 5; 68, 3; 69, 3, 8; vii, 68, 3; 69, 4; viii, 8, 10; 35; x, 39, 11; etc). They are named conjointly Nāsatya (i, 116, 1, 2, 4, 9, 10, 11, 14, 17, 19, 20, 23) and Dasra;—but these names in later times became the names of the two Aśvins respectively. Now who were these Aśvins? Yāska, the oldest commentator, in the Nirukta, thus remarks:—

तत् कौ अश्विनौ । द्यावा इयिवौ इति एकै । अहोरात्रौ इति एकै । सूर्यचन्द्र
मयी इति एकै राजानौषुष्कृती इति ऐतिहासिकाः । तयोः काल ऊर्ध्वमूर्ध्वराचात्
प्रकाशितव्यस्य अनुविष्टमनु ।

“Next in order are the deities whose sphere is the heaven; of these the Aśvins are the first to arrive. They are called Aśvins because they pervade everything, the one with moisture and the other with light. Aurnabhāva says they are called Aśvins, from the horses. Who then are those Aśvins? ‘Heaven and earth’ say some; ‘Day and Night’ say others; ‘The Sun and Moon’ say others; ‘Two Kings, performers of holy acts’ say the legendary writers. Their time is subsequent to mid-night, whilst the manifestation of light is delayed. The dark portion denotes the intermediate (god=Indra?), the light portion Āditya (the Sun).”¹

Roth following the remarks of Yāska, identifies the two Aśvins with Indra and the Sun; but this identification is

¹ Muir: Sanskrit Texts, Vol. V., p. 234.

unwarranted for Durgā the commentator on Yāska never attributes to the latter the view which Prof. Roth ascribes to him.

The Aśvins are long armed (i, 3, 1), swift handed (i, 3, 2) gods who are ever young (vii, 67, 10; 69, 8) and know no old age (i, 112, 9; 116, 20). They are powerful gods (i, 3, 2) who go to all directions (i, 4, 6, 14), perform various deeds (i, 3, 2), and know everything (i, 120, 2). They are of terrific paths (i, 3, 3) and for them the R̥bhus made a car which goes everywhere (i, 20, 3; x, 39, 12). This golden car (i, 92, 18; 129, 4; v, 75, 3; 77, 3; viii, 5, 29) was triangular in shape (i, 34, 12; 47, 2), and had three wheels (i, 34, 2, 5, 9, viii, 8, 23) and three columns (i, 34, 2; 47, 2; 118, 1, 2; 157, 3). It was drawn by horses (i, 116, 17; 118, 5; 119, 1, 5; 177, 6; 158, 3; 180, 6; iii, 50, 2-3; iv, 45, 4-7; vii, 69, 1; viii, 5, 7) who were called Hari (i, 181, 5) or by asses (i, 34, 9; 116, 2; Nighantu, I, 14) which were whipped (i, 22, 3); sometimes the car was drawn without any horse (i, 112, 12; 120, 10) or with Gangetic porpoise and ass (i, 116, 18). They had a ship with a hundred oars (i, 116, 5). They are the gods of cure (i, 92, 18; viii, 8, 19) and they know the earthly, the aerial, and the heavenly medicines (i, 34, 6). They performed many wonderful cures which are related elsewhere. They drink soma for pleasure (i, 46, 12) and sound conchshell as they travel in their car.

In some passages in the R̥gveda the Aśvins, like the R̥bhus, are described as men नरौ (i, 3, 2; 180, 4; 182, 8). Evidently they were men, skilled in surgery and horsemanship. Goldstucker takes the same view and I quote his remarks from Muir's Sanskrit Texts, Vol. V., p. 255.

“The myth of the Aśvins is, in my opinion, one of the class of myths in which two distinct elements, the

cosmical and the human or historical, have gradually become blended into one..... The historical or human element in it, I believe, is represented by those legends which refer to the wonderful cures effected by the *Aśvins*, the cosmical element is that relating to their luminous nature. The link which connects both seems to be the mysteriousness of the nature and effects of the phenomena of light, and of the healing art at a remote antiquity. That there might have been some horsemen or warriors of great renown who inspired their contemporaries with awe by their wonderful deeds, and more especially by their medical skill, appears to have been the opinion of some old commentators mentioned by *Yāska*, for some 'legendary writers' he says, took them for 'two kings, performers of holy acts;' and this view seems likewise borne out by the legend in which it is narrated that the gods refused the *Aśvins* admittance to a sacrifice on the ground that they had been on two familiar terms with men."

I may add that the cures performed by the *Aśvins* as described in the *R̥gveda* do not always partake of a supernatural character; those cures can be performed by mortal surgeons. Many of the deeds attributed to them are of the more ordinary of medical practice. As regards the myth of their birth, developed in later times, see *Bhāskara*. (Also *R̥v.*, 10, 7, 2).

The *Aśvins* bear some resemblance to *Chiron* the Centaur who was very famous for his knowledge of medicine. The herb which healed *Chiron's* wounds bore the name of *Centaury* after him. Like the *Aśvins*, he is said to have taught his knowledge of simples to *Aesculapius*, to *Hercules*, to *Aristes* and other Greek heroes. The Centaurs were the wild inhabitants of *Thessaly*. They were skilful horse tamers and riders, and from this *Chiron*

is said to have the form of half man and half horse. We think that the legend of Saranyu and Vivasvat who assumed the form of horses might have similar origin. Max Müller expresses the same opinion: "The legend of the Saranyu and Vivasvat assuming the form of horses may be meant simply as an explanation of the name of their children, the Aśvins."¹

The Aśvin twins bear some physical resemblance to Castor and Pollux, 'the two handsome, beautiful young men that ride upon white horses.' They are the twin sons of Jupiter and Leda. She was the wife of Tyndarus, King of Laconia, whom Jupiter loved. Castor was a horse tamer, and Polydeuces (Lat. Pollux), the master of the art of boxing. Like the Aśvins they fought many battles, but they had no knowledge of medicine.

In the recent excavations at Boghaz Koyi in Cappadocia in North-Western Mesopotamia, Winckler discovered in certain documents in cuneiform character names of four Vedic gods, *viz.* Mitra, Varuṇa, Indra and Nāsatyas or the Aśvins; among other gods worshipped by the Kings of Mitani in the Euphrates Valley about 1600 B.C. It is possible that "these tribes, being neighbours and perhaps subjects of Vedic tribes who had reached a higher level of civilization, adopted the Vedic gods, and thus brought the Vedic worship with them to their new homes in Mesopotamia".² It is said that even the Mitanian Kings coined their names from the ancient Vedic language.³ In the Zend Avesta Nāsatya assumes the name Naunghaithya.

¹ Science of Language (1882), Vol. II, p. 530.

² J. R. A. S., p. 726, 1909.

³ Roger : History of Babylon, Vol. I, p. 110.

INCIDENTS OF THEIR LIFE.

The following legends are mentioned in the Rgveda :—

(1) When the sage Cyavana became old and decrepit, he was restored to youth and beauty, and was made acceptable to his young wife Sukanyā, daughter of Śaryyāti (i, 116, 10 ; 117, 13 ; 118, 6 ; v, 74, 5 ; vii, 68, 6 ; 71, 5 ; x, 39, 4).

(2) They restored Viṣṇāpu to his father Viśvakāya, the son of Kṛṣṇa (i, 116, 23 ; 117, 7 ; vii, 86, 3 ; viii, 86 ; x, 65, 12).

(3) They rendered the old Kali young who gained his wife (i, 112, 15 ; x, 39, 8).

(4) They brought to Vimada, the bride Kamadyū, also called Śundhyuva, the beautiful daughter of Purumitra (i, 112, 9 ; 116, 1 ; 117, 20 ; x, 39, 7 ; 65, 12).

(5) They favoured Bhujyu, son of King Tugra and bore him home on their ships when he was left in the middle of the sea (i, 112, 6, 20 ; 116, 3, 4, 5 ; 117, 14, 15 ; 118, 6 ; 119, 4, 8 ; 158, 3 ; 180, 5 ; 182, 5-7 ; vi, 62, 6 ; vii, 68, 7 ; 69, 7 ; viii, 5, 22 ; x, 39, 4 ; 40, 7 ; 65, 12 ; 143, 5).

(6) When Viśpalā's leg was severed in battle, they substituted an iron leg instead (i, 112, 10 ; 116, 15 ; 117, 11 ; 118, 8 ; x, 39, 8).

(7) They cured Rjṛāśva of his blindness, inflicted as a punishment by his father (i, 112, 8 ; 116, 16 ; 117, 17 ; 120, 6).

(8) They restored Parāvrja, who was blind and lame, to sight and power of locomotion (i, 112, 8).

(9) They raised and revived the Ṛṣi Reva who was bound and drowned in a well (i, 112, 5 ; 116, 24 ; 117, 4, 12 ; 118, 6 ; 119, 6 ; x, 39, 9).

(10) Vandana was raised by them out of a pit and restored by them to youth from decrepitude (i, 112, 5 ; 116, 11 ; 117, 5 ; 118, 6 ; 119, 6, 7 ; x, 39, 8).

(11) They bestowed wisdom on Kakṣīvān, of the Prajra dynasty, made him young and caused wine and honey to flow forth from their horses' hoofs (i, 116, 7 ; 117, 6 ; x, 143, 1).

(12) Delivered Atri and his companions from a gloomy abyss, where they were thrown by evil spirits (i, 112, 7, 16 ; 116, 8 ; 117, 3 ; 118, 7 ; 119, 6 ; 180, 4 ; v, 78, 4 ; vii, 71, 5 ; viii, 5, 25 ; 73, 3, 78 ; x, 39, 9, 40, 7) ; and gave him food and made him young (x, 147, 1).

(13) In response to Vadhrimatt's invocations, they gave her a son called Hiranyabasta and delivered her with ease (i, 116, 13 ; 117, 24 ; vi, 62, 1 ; x, 39, 7 ; 65, 12).

(14) They cured princess Ghoṣā, the daughter of Kākṣivāna, of her leprosy and gave her a husband even when she became an old maiden (i, 117, 7, 19 ; x, 39, 3, 6 ; 40, 5, 9). Her son Subasti praised them (i, 120, 5).

(15) They caused the cow of Śayu, who had left off bearing, to yield milk. (i, 112, 3 ; 116, 22 ; 117, 20 ; 118, 8 ; 119, 6 ; vi, 62, 7 ; vii, 68, 8 ; x, 39, 13).

(16) They gave Pedu a swift white horse which overcame his enemies (i, 116, 6 ; 117, 9 ; 118, 9 ; 119, 10 ; vii, 71, 5 ; x, 39, 10).

(17) They helped Indra (x, 131, 5) and other persons (i, 112 ; 116 ; 117 ; 118 ; 119) and rescued from the jaws of a wolf a quail (i, 112, 8 ; 116, 14 ; 117, 16 ; 118, 8 ; x, 39, 13).

(18) They cured Kakṣivat of blindness and deafness (i, 116, 120 ;) and sage Śroṇa of his weak knees (i, 112, 8).

(19) The Aśvins also gave sight to Kaṇva (i, 117, 8 ; 118, 7 ; viii, 8, 20), and the power of hearing to the son of Nṛṣada (i, 11, 7, 8).

(20) Delivered Vāmadeva from his mother's womb (i, 119, 7).

(21) They killed the son of Viṣāṇ Asura with poisoned arrow (i, 117, 16) ; with Indra killed Pṛthuśravā's enemy (i, 116, 21) ; killed Śamvara for Divodāsa (i, 112, 14) ; also killed Pani (i, 184, 2).

(22) Sāved Rājarṣi Antaka, Karkandhu, Vayya (i, 112, 6), Pṛśaṅgi, Purukutsa (i, 112, 7), Kutsa, Naryya, Śrutaryya (i, 112, 9 ; x, 40, 6), Veśa, son of Aśva (i, 112, 10), Kākṣivān, son of Uśija (i, 112, 11) Māndhātā (i, 112, 13), Bharadvāja (i, 112, 13 ; 117, 11), Vamra, Pṛthi who was without horse (i, 112, 15), Śayu (i, 112, 16 ; vii, 68, 8), Manu, sage Syūmarāśmi (i, 112, 16), Śaryyāta (i, 112, 17), Adhrigu (i, 112, 20 ; viii, 22, 10), Kṛśānu (i, 112, 21), Kutsa, son of Arjjuna ; Turbīti, Dabhiṭi, Dhvasanti and Puruṣanti (i, 112, 23), King Jāhuṣa when surrounded by enemy (i, 116, 20 ; 117, 16 ; vii, 71, 5), Vaśa (i, 116, 21 ; viii, 8, 20 ; x, 40, 7), Dīrghatamā, son of Mamatā, from fire and water against Traitana (i, 158, 4-6) ; Priyamedha (viii, 5, 25), Medhātithi, Daśabraja, Gośaryyā, (viii, 8, 20) ; Tryasdasyu (i, 112, 14 ; viii, 8, 21), Takṣi, Paktha (viii, 22, 10), Uśanā, (x, 40, 7) ; Kṛśa (i, 112, 14 ; 7, 40, 8) ; Śvaiyuva (x, 40, 8), and Kanva (viii, 5, 25).

(23) Learned Madhuvidyā¹ from Dadhici son of Atharvā whom they supplied with a horse's head (i, 116,

¹ According to Śāyana Madhuvidyā, also called Apikakṣa is the science of re-uniting the severed head with the trunk : हिदस्य य शिरसः कक्षप्रदेशेन पुनः सन्धानमूर्ध्वं प्रवर्गेविद्यायां रक्षसः—Śāyana (i, 117, 22).

12; 117, 22; 119, 9); became a guest of Divodāsa (i, 116, 18; 119, 4), came to Jahnu's sons with riches and progeny (i, 116, 19), and gave food to Manu (i, 112, 18) and Saubhari (viii, 5, 26).

(24) Gave potable rain water to merchant Dirghaśravā, son of Uśija, (i, 112, 11), recovered the cows of Triśoka (i, 112, 12), made Paṭharvā strong in battle (i, 112, 17), and gave food to Sudāsa (i, 47, 6) and Bharadvāja (i, 117, 11), and Agastya (viii, 5, 25).

(25) They cured Śyāva who was cut in three pieces (i, 117, 24) and gave him a bride after he was cured of leprosy (i, 117, 8); raised water to quench thirst of Sara son of Rcatka (i, 116, 22); satisfied Vabhru with Soma (viii, 22, 10) and helped Gotama to drink water in the desert (i, 85, 11; 116, 9).

(26) Gave riches to Manu (i, 112, 16, 18), Śucānt, Sudāsa, the son of Pijanava (i, 112, 19), Vaśa (i, 116, 21), Amśu (viii, 5, 26), and King Suśāma (viii, 26, 2).

(27) Released Saptavadhri and allowed him to enjoy the company of his wife; she gave birth to a child after ten months (v, 78, 5-9).

(28) Gave Puraya's mares, Sumiḍha's cows, Peruka's food, King Sānta's horses and men, and Purupanvā's horses to Bharadvāja (vi, 63, 9, 10).

(29) Discovered Vṛtra (viii, 9, 4), produced fire by friction with woods (x, 24, 4).

(30) Aśvins were magnified by Kākṣivān, Vyaśva, Dirghatāmā and Prṛthi, son of Vena (viii, 9, 10)

(31) Gave rain water to Manu and furrowed the land and sowed wheat (vii, 22, 6)

In the R̥gveda Aśvins are magnified in the following hymns :

i. 3 : 1,2,3.	iii. 58.	viii. 5.
20 : 3.	iv. 43.	8.
22 : 1-4.	44.	9.
30 : 17.	45.	10.
34.	v. 41 : 3.	22.
46.	43 : 17.	26 : 1-20.
47.	51 : 11.	27 : 8.
92 : 16-18.	73.	29 : 8.
112.	74.	35.
116.	75.	57.
117.	76.	73.
118.	77.	85.
119.	78.	86.
120.	vi. 62.	87.
139 : 3-4.	63.	101 : 7-8.
157.	vii. 67.	x. 24 : 4-6.
180.	68.	39.
181.	69.	40.
ii. 37 : 5.	70.	41.
39.	71.	65 : 12.
41 : 7-9.	72.	106.
	73.	131 : 5.
	74.	143.

References to the Aśvins as medical men in the R̥gveda :

- i. 34. 6 : Prayer for heavenly medicine, earthly medicine and aerial medicine. The three elements of the body mentioned.
Nursed Śatŕju son of Vṛhaṣpati.

11 : Prayer to prolong our life.

- 116, 15 : Made artificial limb of iron for Viśpalā.¹
 157, 4 : Prayer to prolong our life.
 5 : Prayer to preserve the wombs of animals.
 6 : You have become physician by your medicines.
 180, 4 }
 10 } : Prayer for long life, food and strength.
 182, 8 }
 183, 6 }
 184, 6 }
 ii. 9, 4 : Prayer to save us from old age.
 v. 75 : Madhuvidyā Viśārād : Versed in the science of
 reviving dead men.
 78, 7-9 : The mantras for prevention of abortion
 गर्भंश्चावष्टुपनिषत् ।
 vi. 62, 7 : You hear the prayer of women longing for
 sons. You make dry cows yield milk.
 10 : Come to our house to give us sons.

¹ “चरित्रं हि वेरिवाच्छेदि पर्णम्
 आज्ञा खिलस्य परितक्मायाम् ।
 सद्यो जंघामायसीं विश्पलायै
 धने हिते सत्तवे प्रत्यधत्तम् ”

Rgveda, i, 116, 15.

अगस्त्यपुरोहितः खेलो नाम राजा तस्य सम्बन्धिनी विश्पला नाम स्त्री, संयामे
 शतुभिः किन्नपदा आसीत् । पुरोहितेन अगस्त्येन स्तुतौ अश्विनी राक्षी आगत्य आयोमयं
 पादं समधत्ताम् । तदेतदाह—‘अज्ञा’—अज्ञी, संयामे, अगस्त्यपुरोहितस्य खेलस्य
 राज्ञः सम्बन्धिनीः विश्पलाख्यायाः, ‘चरित्रं’—चरणम्, ‘वेरिव’—वेः पक्षिणः पर्णं
 पतचम् इव, ‘अच्छेदि हि’—पुरा किन्नमभूत् खलु । हे अश्विनी ! युवां अगस्त्येन
 स्तुतौ सन्तौ, ‘परितक्मायां’—राक्षी, आगत्य, ‘सद्यः’—तदानीमेव, ‘सत्तवे’—सत्तुं
 गन्तुम् इत्यर्थः, विश्पलायै ‘आयसीं’—लौहमयीम्, ‘जङ्घां’—जङ्घाफलचितं पादम्,
 ‘प्रत्यधत्तम्’—सन्धानम् एकीकरणमित्यर्थः, कृतवन्तौ ।”

- vii. 8, 19 : Giver of cure.
 9, 11 : Be the nourisher of the world and the body.
 15 : Give Vatsya a house, like Vimada, with
 medicines which are near and which are
 distant.
 22, 10 : You treat the sick.

We find similar references in the Atharvaveda.

- vii. 53, 1 : The Aśvins—they who are the two physicians
 of the gods—they have repelled death from
 us by their powers.

In the Caraka Saṁhitā the deeds preformed by Aśvins are thus referred to :—

“The twin Aśvins are celestial physicians. It has been said that they are partakers of a share of the offerings made in sacrifices. (In days of yore) when the head of sacrifice had been severed from his body, it was the Aśvins who fixed it again on the trunk.

“The broken teeth of Puśāna, the torn out eyes of Bhaga and the stupefaction of the arms of the wielder of the thunderbolt were treated by him.

“The deity also of cool ray (*viz.*, Soma) was treated by them when he was seized by Phthisis. Verily when Candra was (in consequence of Phthisis) divested of his handsome features, it was the Aśvins who restored him to happiness (by curing him of his maladies).

“Cyavan, the son of Bhrigu had not given up desire when he had become old and been overtaken by ugliness and when he had been afflicted by loss of complexion and voice. It was the Aśvins who restored him to youth once more.

“Those foremost of physicians by these and diverse other acts (of success in treatment) became objects of

worship with many high-souled deities and others having Indra for their head.¹

In the *Suśruta Saṁhitā* I. 1, the supernatural cures performed by Aśvins are thus related :—

“It is said that the god Rudra severed the head of the god of sacrifice (Yajña). Thereon the gods approached the divine Aśvins and addressed them in the following manner :—‘O Lord Aśvin twins, who are to be the greatest of us all, unite the head of the Yajña with his severed trunk.’ The Aśvins replied, ‘We shall do, O Lords, as you order us.’ Then the gods propitiated the god Indra in order that a portion of the oblations offered in the course of a sacrifice, might be allotted to those heavenly twins. The Aśvins reunited the severed head of Yajña to his body as prayed for.” The Aśvins thus secured an everlasting glory on the art of healing and received the Aśvin libation. “At one time,” says he, “surgeons were looked upon as unclean and unfit to mix in respectable society ; but the success gained by the Aśvins in the case of Yajña at once raised them in the estimation of all ” (*Vide* Tait. Saṁ., vi, 4, 9, 1 ; Śatap. Br., and Ait. Br., 1, 18).

The following epithets are applied to the Aśvins in the *R̥gveda* :

Śatakratu (i, 112, 23).

Nara (i, 46, 4 ; 47, 8 ; 182, 8 ; 183, 3).

Madhuvidyā Viśārad (i, 116, 12 ; 117, 22 ; 119, 9 ; v, 75, 1—9).

Two Dhanañjayas (vii, 74, 3).

Two Rudras (ii, 41, 7 ; v, 73, 8 ; viii, 22, 14 ; 26, 5).

Pracetās (viii, 9, 15, 20).

Maghavā (viii, 26, 7).

HISTORY OF INDIAN MEDICINE

Sac pati (vii, 67, 5).

Bhiṣaj : (1, 116, 16 ; viii, 86, 1 ; x, 39, 5).

Paura (v, 74, 4).

Amara (Immortal) (v, 77, 5).

Two Kings (vii, 67, 1 ; 71, 4 ; x, 39, 11).

Two devas (vii, 70, 4 ; 74, 4 ; viii, 35, 4-6, 26 ; x, 24).

Two lords of water (viii, 21, 4, 5 ; 26, 6).

Two poets (x, 40, 6).

Vidhātā (i, 181, 7).

Puṣā (i, 184, 3).

Two Nāsatyas : i, 3, 3 ; 20, 3 ; 34, 7, 9-11 ; 46, 5
47, 7, 9 ; 116, 1, 2, 4, 9-11, 13, 14, 17, 20, 22 ;
117, 6, 11, 23 ; 118, 4, 11 ; 180, 9 ; 182, 43 ;
183, 3 ; 184, 3 ; ii, 41, 7 ; iv, 3, 6 ; 43, 7 ; 44,
4, 7 ; v, 74, 2 ; 75, 7 ; 77, 4 ; 78, 1 ; vi, 63, 1,
7, 10 ; vii, 67, 3 ; 72, 1, 2, 5 ; 72, 5 ; 74, 6 ;
viii, 5, 23, 32, 35 ; 8, 14, 15 ; 9, 6, 9 ; 22, 5 ;
26, 2, 8 ; 42, 4-6 ; 57, 4 ; 85, 1, 9 ; 101, 7 ;
x, 41, 2.

Two Dasras : i, 3, 3 ; 47, 2, 6 ; 92, 16, 18 ; 112, 24 ;
117, 5, 20, 22 ; 118, 3 ; 119, 7 ; 120, 4 ; 139, 3,
4 ; 180, 5 ; iv, 43, 4 ; 44, 6 ; vii, 69, 3 ; viii,
86, 1.

THEIR WORKS :

The Aśvins are credited with the authorship of the following books :—

1. **Cikitsāsāra Tantra** : or the Abstract of Treatment by the Aśvins. It is mentioned in the **Bramhavaivarta Purāṇa**.¹

2. In the Bower MS., the eleventh chapter treats of "The doctrine of **Chebulic Myrobolana** according to the

¹ See footnote 3, pp. 6-7.

Aśvins." "This chapter apparently professes to be the Haritaki-kalpa or 'Doctrine of Chebulic Myrobolan' extracted from a medical work by the Aśvins. This may have been the Aśvini Saṁhitā of which, however, no copy seems now to be known to exist. As an extract, therefore, from a lost work of the Aśvins, the chapter is important. A similar Haritaki-kalpa which gives the doctrine of the ancient physician Hārīta on Chebulic Myrobolan occurs in the Hārīta Saṁhitā in its Kalpa-sthāna (printed Ed., p. 400)." (Hærnle.)²

3. The Aśvin Saṁhitā : An Aśvin Saṁhitā is quoted in Bhāva Prakāśa II, 3, p. 24 (Jiva. Ed.). Dr. Cordier (see his *Recentes Decouvertes*, p. 29) possesses fragmentary manuscripts of two distinct works, both calling themselves Aśvini Saṁhitā, and both containing a version of a Haritaki-kalpa. Dr. Hærnle thinks them to be *medieval apocryphal* production.

4. Dhāturatnamāla : A compilation from the Aśvini Kumāra Saṁhitā on the preparation of metallic and mineral powders as oxides and other compounds of gold, silver, copper, lead, tin and iron.

MSS : Bik. MSS., 1393. (Saṁvat 1717).

Begins :

अथ धातूनां रत्नमालां वक्ष्यामः ।
 रौप्यं ह्येन तथा ताम्रं नागं वज्रं तथायसम् ।
 मरवेभ्यो भयवाता रोगयन्ताश्च ये नराः ।
 रत्नमाला हि धातूनां कृता एषां हिताय वै ॥

End :

इति—वैद्यकशास्त्रे अश्विनीकुमार संहितायां रत्नमाला समाप्ता

See also Devadatta of Guzrat (14th century).

² Footnote 359 in Bower MS., Ch. XI, p. 164.

5. *Aśvini Saṁhitā* :

MSS. : G. O. M. L. xxiii, 13069.

“A treatise on medicine said to have been revealed by the celestial twin brothers *Aśvins*. Contains *Kanarese* meaning for the stanzas.

Beginning :

अन्नगन्धा वचा कुष्ठं गजपेयालिका समम् ।
मद्भिषोऽनवनीतेन लिपात्कर्णं विवर्धते ॥

Colophon :

इत्यत्रिनौसंज्ञितायां सन्निपातप्रकरणं ।

End :

उपचेपस्ततो दाहः देहि तिष्ठन् मदात्ययम् ।
विषमं वा त्वरं कुर्यात् सत्यं व्यापदमेव च ॥

6. *Nāḍī Nidāna* : “A commentary on the *Nāḍī Nidāna* which is a treatise on the science of feeling the pulse, said to have been revealed by the twin celestial brothers *Aśvins*.”

MSS. : G. O. M. L. xxiii, 13151.

Beginning :

आदौ समस्तरोगेषु अष्टस्थानं परीक्षयेत् ।
नाडीं च स्पर्शरूपं च शब्दनेत्रपरीषयोः ॥
नाभिस्थानं च जिह्वा च एता दृष्ट्या भिषग्वरेः ।

आदौ रोगपरीक्ष(ण)समादौ समस्तरोगेषु वातश्चेत्तपित्तगतसर्वरोगेषु । अष्ट-
स्थानगतनाडीं परीक्षयेच्च शोधयेत् ।

End :

सर्वेषां रोगाणाम् एतच्च षड्गुणा शुभाः ।

Colophon :

अत्रिनौदेवताकृतौ नाडीपरीक्षा सप्तविंशति श्लोकाः समाप्ताः ।

The formulæ attributed to the Aśvins :—

Formulæ.	Books.	Page.	Verses.	
1. The Mātulaṅga Pills	... { C.D. xxiii, 11, 251 Bower MS. 87	75b-77a		
2. The other " "	... " "	80-84		
3. The Gulma Powder	... " "	88 85-6		
4. Aśvina-haridrā-cūrṇa	... " "	96-101		
5. The Laṣuna clarified butter	... " "	100 216-22		
6. The Antifebrile " "	... " "	223-5		
7. The Antitoxic " "	... " "	102 241-4		
8. The Vindu clarified butter	... " "	103 251-5		
9. Formula to cure hæmorrhage	... " "	117 418-25		
10. Amṛita-taila	... " "	106 287-312a		
11. Kṣīra Yoga	Medicines for strangury	"	133 575	
		V. S. xxxv.	{ 497 29a	
		C.D. xxxiii.	{ 503 37b	
		B. P. II. 3	43 ...	
		S. S.vi 58	383 40a	
12. Ayorāja Yoga		"	"	133 579
			V.S. xxxv.	499 48
			C. D. xxxii.	384 26a
			B. P. II. 3.	37 ...
	H. S. III. 29		312 ...	
13. The Aśvagandhā Enema	... " "	139 618-25a		
14. Pippalī-Vaddhāmāna Rasāyana	... " "	142 716-737a		
15. Aśvina-rasāyana	... " "	148 773b-81a		
16. A formula for 3 different gruels	... " "	153 810-13		
17. Aśvina Haritakī Kalpa ¹	... " "	164 917-29		
18. Bṛhat Guda Pippalī	... R. S. S.	401 ...		
19. Phalaghṛta	...	V. M.	489-99 ...	
		B. P. II, IV.	1115 ...	
		G. N. I.	15 ...	
20. Amṛta Guggulu	...	V. M.	228 ...	
		G. N II,	240 ...	
		C. D.	152 ...	
21. Amṛtādyā Ghṛta	...	C. D.	150 ...	
		B. P. ii. xxi.	610 ...	
22. Amṛtaprāsavaleha	... " "	ii. ii.	388 ...	
23. Punarnavā Guggula	... C. D.	152	...	
24. Kuṅkumādyā Taila	...	C. D.	274 ...	
		V. M.	412-13 ...	
25. Gadhūmādyā Ghṛta	... V. M.	527	...	
26. Mahāśugandhi Oil	... " "	"	...	
27. Guḍakuṣmāṇḍa	}	"	528 ...	
		A. H. S. IV.	78 ...	
Kusmāṇḍaka Rasāyana	... { G. N.	340	...	

¹ For the list see I. A., February 1914, p. lx.

Formulae.	Books.	Pages.	Verses.
28. Vṛhat Nārikelakhaṇḍa	... B. P. ii. vi.	368-9	...
29. Dāḍimāḍya clarified butter	... C. D.	199	...
30. Śatāvarī " "	... G. N. I.	14	...
31. Hingvāḍya Powder	... { Aśvinsamūhitā	69	...
32. Dasāṅga Oil	... G. N- I.	45	...
33. Vṛhat Agnimukha powder	... "	83	...
34. Citraka Haritakī Avalaha	... "	150	...
35. Haritakī Avalaha	... "	151	...
36. Citraka Avalaha	... "	156	...
37. Svalpakadalikhaṇḍaghṛta	... Sathkṣiptasāra.	44	...
38. Ayalapati Rasa	... Cikitsāsāra Saṁgraha Goml., xxiii, 13140.		
39. Mārtanḍa Rasa :	... Ratnakaraṇḍha Yoga- grantha, Goml., xxiii, 13190.		
40. Vālasūryodayo	... Vaidya Grantha, Goml; xxiii. 13221.		

1. MĀTULAṅGA GUḍIKĀ OF THE AŚVINS.

अश्विनी मातुलुङ्गगुडिका ।

सौवर्शलस्य च पलं द्विगुणं चाम्बुवेतसम् ।

चतुर्गुणमजाजीनां मरिचचाष्टमं भवेत् ॥

मातुलुङ्गरसेनैतद्गुडिकां कारयेद्विषक् ।

प्रशालमग्निश्चनयेद्यतशूलस्य नाशयेत् ॥

2. AŚVINS' MĀTULAṅGA GUḍIKĀ.

अश्विनी मातुलुङ्गगुडिका ।

साश्विकं चिकटुकं सह पुष्करिण

द्विङ्गुम्बुवेतसयुतां सविज्ञान्गन्धां ।

कुसुम्बुनि वचसा सह दाडिमस्य सौवर्शलं

यवमयं तु नवच चारं ॥

दद्यात्तुलाष्टतसमांशनां यवानां

कृष्णाजगन्धपिशुनामरजासजाजीं ।

तद्वास्तरांशपरिग्रहसमाहितार्शं

चण भिषक्स्मरसं तनुं योजयीत ॥

तद्दीनपूरकरसैर्निचितं प्रपिथ
 कूर्याद्विष्टं यं गुड़िका वदरप्रमाणाः ।
 एकामरिष्टमधुमाधवशक्तेरेण
 काल्यं पिवेत सुरया दधिमस्तुना वा ॥
 काशं श्वासं पाण्डुरोगाश्चिरस्थं
 ग्रीहस्थीयं शूलमानाहमुग्रं ।
 हिक्कां हृद्रोगं जाब्धतां
 ठीवनत्वमातिसारश्च सशूलगुण्यं ॥
 विमृष्टिकामलसकमग्निमाह्वं
 प्रवाहिकां गुदपरितापमशंसां ।
 शमीनि ता विधिवदिहोत्तमं तमः
 प्रयोजिता ह्यपि खलु धर्मवारिणा ॥

3. AŚVIN'S GULMA CURE.

गुल्मचूर्णमाश्लिष्यं ।

पाठाकलिङ्गयवमुस्तकरोहिणीनां मागाः
 सहातिविषया धरणानि कूर्यात् ।
 कूर्याच्चतुर्यधरणेन समां हरिद्रां
 सूत्रेण गोः सह पिवेदथ चूर्णमेतत् ॥
 कुष्ठाणि षट्त्रिंशतिकानि निहति देहे
 स्थानानि नाशयति सप्तमहाचयस्य ।
 गुणां यं नाशयति मासकृतः प्रयोगः
 सर्वाग्निकस्य हृतमांसपरस्य जन्तोरिति ॥

4. AŚVINA-HARIDRĀ-CŪRṆA.

हरिद्राचूर्णमाश्लिष्यम् ।

उभे हरिद्रे मरिचं पत्रं कुष्ठं सपिप्पली ।
 कर्पासमूलं मांसौ च सर्वाः चारमघाष्टामसः ॥

एतानि समभागानि दृषदायां प्रपीषयेत् ।
 कोलास्थिमाचां गुडिकां क्वायायां परिशीषयेत् ॥
 ततस्तु गुडिकामिकां दद्यादुष्णे च वारिणा ।
 + + + प्रशम्यन्ते रोगजातानि ताश्चक्षुष ॥
 अजीर्णकमुदावर्त्तं मूत्रकृच्छं मलयहम् ।
 आनाहं वातशुष्माच्च यच्च स्तूताविषं भवेत् ॥
 सर्वं दूषीविषं हन्ति + + वृश्चिकदष्टकम् ।
 मूढवातमपस्मारं शाण्ड्यं शाण्ड्यपुमानं च यः ॥
 भूतशङ्खमथीन्द्रादं मूढगर्भाच्च यास्त्रियः ॥
 दंष्ट्रामूलविषाणेषु पानमालिपनं तथा ॥

5. THE LASUNA CLARIFIED BUTTER,

आश्विनं लग्ननकं नाम घृतं ।

लग्ननस्य शतं विहास्यलैट्रोणे विपाचयेत् ।
 चतुर्भागवशेषश्च कषायमवतारयेत् ॥
 तेन वैद्यः कषायेन विपचेत् घृतादकम् ।
 कल्कपिथ्याणि चैतानि सिद्धमानि प्रदापयेत् ॥
 कर्षश्चिकमूलस्य पिप्पली कर्षमेव च ।
 अव्यायाश्च भवेत्कर्षः शृङ्गवेरं पलं तथा ॥
 लवणानाम् च पञ्चानाम् पलाईश्चास्त्रवेतसात् ।
 तथा रामठकस्यापि हिङ्गुनोऽत्र पलम् भवेत् ॥
 ततस्त्रिंशं निष्कृतं सम्यक्सुगुतं तन्निघापयेत् ।
 ततोभावां पिवेत्काले शृणु मे येषु तद्धितम् ॥
 वातहौलास्तु गृध्रस्यां वातशुष्मे ज्ञीहोदरे ।
 वातश्चे भातिपाण्डुनामर्शसूक्ष्म भगन्दरे ॥
 एकाङ्गरोगिणां दद्यात् तथा सर्वाङ्गरोगिणाम् ।
 लग्ननाद्यं घृतं ह्येतदश्विभ्यां संप्रकल्पितम् ॥

6. THE ANTIFEBRILE CLARIFIED BUTTER.

ज्वरहरमाशिनं नाम घृतं ।

घृतन्दशगुणे तोये साधयेदा जलक्षयात् ।
ततो दशगुणे तोये साध्यमासलकन्तया ॥
दशभागावशिष्टेऽस्निग्धतप्रस्थं विपाचयेत् ।
ततो यथाबलं मावां पाययेज्वरकाशितम् ॥
सर्वज्वरहरं सर्पिरेतद्वद्राभिपूजितम् ।
दीर्घकालं प्रयुक्तानु भवेत्तल्यम् रसायनम् ॥

7. THE ANTITOXIC CLARIFIED BUTTER OF THE ASVINS.

विषहरद्राम घृतमशिनम् ।

अन्दनं स्यादुशिरश्च पद्मकं कुरुविन्दकम् ।
वायमाणाम् समां दद्यात्तथा अन्दनशारिकां ॥
तथा प्रतिविषां चैव तथा तामलकौ भवेत् ।
चतुर्गुणे जले वैद्यो घृतप्रस्थं विपाचयेत् ॥
तच्च पीतं प्रमेहोनाम् रक्तपित्तघ्नेषु च ।
अशंसाम् भिन्नवर्णानाम् पाण्डुरोगे च तद्वितम् ।
प्रणदेद यक्ष्णोदीषां स्त्वन्दोषां च शारौरिषाम् ।
सर्पिरेतद्ववेत्पथं विषघ्नममृतोपमम् ॥

8. THE VINDU CLARIFIED BUTTER.

विन्दुघृतमाशिनम् ।

सुधाक्षीरपलेनेह हे पले सर्पिषः पचेत् ।
कम्पिल्लकपलं चेकं शण्ठाहम् सेन्धवस्य च ॥
विहतायाः पक्षाक्षैकं कुङ्कुमोऽमलकौरसात् ।
तोयकंसेन विपचेच्छनेरम्बुं हृदिना भिषक् ॥
एतद्विन्दुघृतं नाम अश्विनोऽनुमतम् शुभम् ।
विन्दवः पिबते यावत्तावद्देहान्विरिष्यते ॥

कर्षप्रमाणन्दातव्यं जठरोसोपशुभमयोः ।
 तथा कच्छपरोशिनाम् युञ्जीत सतिमान् भिषक् ॥
 उर्ध्वचानुपिवेत्तोयमलत्वात्तस्य सर्पिषः ।
 एष शुभान्सनिचयान्सगुलान्सपरिग्रहान् ॥
 भिनत्येकप्रयोगेन वायुज्वलधरानिष ।
 पञ्चगुल्मवधार्थम् हि सर्पिरेतत् प्रवर्तितम् ।
 सर्वांसुरवधार्थाय यथा वयं स्वयमभूवा ।
 एतद्विन्दुष्टुतं प्रोक्तं सिद्धम् सिद्धानुमानितमिति ॥

9. A FORMULA OF THE ĀSVINS TO CURE HAEMORRHAGE.

रक्तपित्तिनामाश्विनो योगः ।

विषुष्टशब्दो श्रीमन्तावश्विनी भिषज्जाम् वरौ ।
 योगम् लोहितपित्तिनामर्शसाम् ज्वरितेषु च ॥
 वासवायोचतुः श्रेष्ठम् यदुक्तम् ब्रह्मणापुरा ।
 चन्दनं नलदम् रोध्रमुशीरम् पद्मकेशरम् ॥
 नागपुष्पाच्च विल्वश्च भद्रमुस्ताश्च शर्कराम् ।
 हिरिवेरश्च पाठां च कुटजस्य फलं त्वचम् ॥
 शङ्खवेरम् सातिविषां धातकीम् सरसाञ्जनाम् ।
 आक्षिप्ति जम्बुसारास्त्रि तथा मोवरसं भवेत् ॥
 नीलीत्पलम् समङ्गां च सूक्ष्मालाम् दाडिमत्वचम् ।
 चतुर्विंशति चेतानि समभागानि कारयेत् ॥
 तच्छुलोदकसंयुक्तं क्षौद्रेण सह पाययेत् ।
 हितं लोहितपित्तिनामर्शसाम् ज्वरितेषु च ॥
 मूर्च्छातमोपसृष्टानाम् द्रवार्त्तानाञ्च दापयेत् ।
 अतिसारश्च चर्द्दीश्च स्त्रीणाम् च रजनियहम् ॥
 अश्विभ्यानुमतो योगो रक्तपित्तिनिवारणः ।
 प्रश्रुतानाञ्च गर्भणाम् स्थापनम् परमुच्यते ॥

10. AMṚTA OIL.

अमृत-तेलं नाम ।

सत्यबागन्धिनौ देवौ भिवजौ देवपूजितौ ।
 × × × परमे—+ तैलम् पुष्टि विवर्द्धनम् ॥
 सर्वव्याधिं प्रशमनं राजाङ्गममृतोपमम् ।
 अमृतप्राप्तं विख्यातं तैलं बलकरं नृणाम् ॥
 सुभूमौ मधुकं जातमुद्धरेत् कृतमङ्गलः ।
 पुष्येण प्रयतो विप्राश्च स्वस्तिवाच्यं समासतः ॥
 यादयेत् स्वरसं तस्य चतुष्पाचम् विचक्षणः ।
 प्रपीड्यतीकमृताम्, विसृज्य शतावरीम् ॥
 शङ्खाटकाभ्यामलकानुदुस्वरकशेरुकाः ।
 चौरिणाम् चैव ब्रह्मणाम्, त्वचानि स्युः प्रथक् प्रथक् ॥
 कुशकाशेचुमूलानि शरवीरण्यायोस्तथा ।
 गुडाणाम् नाडिकायाम्, च मूलम्, क्रोशानदानि च ॥
 बदरीं च विदारोचं वेतसं साङ्गरूपकम् ।
 निम्बशालमलिखर्जुरनाडिकैर प्रियङ्गवः ॥
 पटोलं कुटजं द्राक्षां समुष्णालम्, च चन्दनम् ।
 ककुभम्, चाश्वकर्णं च लाम्बकधनञ्जयौ ॥
 कषायमधुराणां च शीताभ्यपि च लाभतः ।
 भागाम्, यतुष्पलान्कृत्वा द्विद्रोणेऽपाम्, विपाचयेत् ॥
 रतेऽष्टभागशेषे तु कल्के रेभिर्विपाचयेत् ।
 वलां नागवलां जीवामात्मगुताम् च शेरुकाम् ॥
 नतं रसं च स्पृक्षां च सूक्ष्मां त्वचमेव च ।
 जीवकर्धभकौ भेदौ मधुकां नीलमुत्पलं ॥
 कुङ्कुमं वर्णं करणमगुरुम् पत्रमेव च ।
 विदारोम् चौरकाकीलीम् वीरानपि च शारिवां ॥

शतावरीम् प्रियङ्गुम् च गुडचूम् पद्मकीसरम् ।
 लामज्जकं चन्दनानि राजादन फलानि च ॥
 सुक्ताविद्रुमसंस्थानाम् चन्द्रकान्तेन्द्रनीलयोः ।
 स्फटिकं रजतम् हंसं मणिमौक्तिकमेव च ॥
 यष्टिमधुकमास्त्रिष्ठामंशुमल्यः पलोन्मितान् ।
 श्लक्ष्णपिष्टानिमान् कृत्वा शनेष्टं हृदिना पथित् ॥
 तैलपावाणि चत्वारि तैलादष्टगुणं पथयः ।
 पयोर्धभागैर्न भिषक् प्रदद्यादास्त्रकाथीकम् ॥
 शतशोऽथ विपक्तव्यं सङ्घस्रगुणमेव वा ।
 सम्यक् सिद्धस्य चाप्यस्य एतद् भवति लचयम् ॥
 आलीक्यते करेणैव रवेः काल उपस्थिते ।
 स्त्रिवाच्यं विजातिम् स्तु प्रयतः कृतमङ्गलः ॥
 प्रयोजयेत् तैलमिदं शतम् देवपूजितम् ।
 वक्ष्यास्यापनपानैश्च नासौरभ्यञ्जनैस्तथा ॥
 सर्वरोगप्रशमनमिन्द्रियानां बलावहम् ।
 दाहदृष्ट्वापरीतानाम् श्रेष्ठमभ्यञ्जनं शिवम् ॥
 ब्रह्मानाम् बालजनानां बालानामङ्गवर्धनम् ।
 कान्तत्वं सिषु सौभाग्यं प्रजय वङ्गविस्तारः ॥
 स्त्रियश्च गर्भं गृह्णान्ति प्रयोगादस्य तस्य हि ।
 अशीतिम् वातजान् रोगान् रक्तजान् पित्तजांस्तथा ॥
 श्लेष्मिकान् सन्निपातोत्थान् सर्वानैव चिकित्सति ।
 सुपर्णं चक्षुर्मांसेन तथाभ्यङ्गादाजायते ॥
 पापमङ्गरमलक्ष्मीघ्नं श्रीमेवाभिविवर्धनम् ।
 अस्य प्रयोगात् तैलस्य महर्षिः श्ववणः किल ॥
 पुनर्युक्त्वामपन्नो जरारोगविवर्जितः ।
 आयुष्कामश्च भगवान् मार्कण्डेयो महान् ऋषिः ।
 तैलमेतत् प्रयुञ्जानो दीर्घमायुरवाप्तवानिति ।

11. KṢĪRA YOGA.

चौर योगः ।

गुह्येन स्रपयेत् चौरं कटुणं कामत, पिबेत् ।

मूलयङ्गस्य मेघज्यम् सदाहं सतमन्त्रिनोः ॥

12. AYORĀJA YOGA.

अयोरज योगः ।

अयोरजः सूक्ष्मपिष्टम् मधुना सहपाययेत् ।

मूलयङ्गस्य मेघज्यं सदाहं सतमन्त्रिनोः ॥

13. THE AŚVAGANDHĀ ENEMA.

अश्विनोरजगन्धा वस्तिः ।

अतः परमं प्रवक्ष्यामि बलवर्णं प्रसादनम् ।

येन मांसानि वर्जन्ते बलं चैवोपजायते ॥

मूलानामजगन्धायाः पञ्चविंशतपलानि तु ।

कन्दशङ्खे दायित्वा तु स्थाव्यामाधाय साधयेत् ॥

पादभागावशिष्टाच्च शाला तमवतारयेत् ।

तद्रसम् तु परिखाव्य दृढपात्रेऽवसेचयेत् ॥

तस्मिन् कषाये मतिमानौषधानि प्रकल्पयेत् ।

जीविनि सर्वाणि शर्कराचूर्णमेव च ॥

मधुसर्पिषश्च प्रसृतम् पिप्पलीचूर्णमेव च ।

किञ्चिद्वनस्पिकम् कृत्वा खजिनालोऽयैर्द्विषक् ॥

आसिष्य वसावच्छिद्रे वस्तिकर्माणि कारयेत् ।

एकेन यदि वा द्वाभ्यां विभिर्न्यापि प्रमाणतः ॥

प्रत्यागते निरुद्धेऽस्मिन् परिषेकः सुस्वास्वना ।
ततो लोहित शालीनामीदनं मधुसर्पिषा ॥
चौरिण सङ्गं भुञ्जीत जाङ्गलानाम् रसेन वेति ॥

14. PIPPALĪ-VARDHAMĀNA TONIC

पिप्पली वर्धमान रसायन ।

पिप्पली वर्धमानस्य गुणाः कर्मा च के वलम् ।
प्रवक्ष्याम्यानुपूर्वेण प्रजानां हितकाम्यये ॥
न ह्येतद्व्यतम् पित्वा पश्चात्तापयन्ति मानवाः ।
दर्शयत्येव सिद्धिं हि पाषावामलकं यथा ॥
तस्मात्तस्मींश्च पुटिष्य प्रजां मेधाश्च काचता ।
रसायाणामिदम् सौम्यं कार्यमायुर्ज्विवर्धनम् ॥
जीवनीयानि पित्वा तु स्त्रिधोवन्तविरिक्तवान् ।
कृतसंस्मरणः काली पुण्याङ्गिनारभेक्षतः ॥
पुनर्व्यस्वस्य पुष्ट्येष श्रवणेन श्रविष्टया ।
त्रिषूत्रेषु हस्तेन सीमे योगमुपागते ॥
उपोषितः शिरःस्नातः शृङ्गारासा जितेन्द्रियः ।
अभ्यक्ष्य देवतान् विप्रम् येकाम् खादेत् पिप्पलीम् ॥
ततश्चानुपिवेत् चौरं गन्धं क्षाममथापि वा ।
जीर्णे तस्मिन् स्तु भुञ्जीत शालीनाम पयसोदनम् ॥
एवमेतन्नरः खादेत् वर्धमानं सदाहृदि ।
शतं पूषम् भवेद्यावद्दृश वर्षाटथैव च ॥
ततोऽन्नेऽप्यवकर्षस्य सप्तरात्रम् पयोदनम् ।
प्रायश्चानुभोक्तव्यं तथा मुद्गरसोदनम् ॥
सप्तरात्रे हतौघे तु जाङ्गली मधुरो रसः ।
भोज्यं पेयं च पानीयम् शतशीतं गुणान्वितम् ॥
गृहे निवाते चासीत सततम् हितसेवि च ।
ततः क्रमेणामलकमम्बुलार्थमुपकल्पयेत् ॥

वृषाभ्यल' दाडिमाम्बलञ्च रुदा स्नानञ्च शीलयेत् ।
 अनेन विधिना क्षिप्रं पुष्टिं लभति मानवः ॥
 प्रमदा लभते गर्भम् वन्ध्या चापि प्रजायते ।
 साम्यं त्यजेन शिवाच्च राजयक्षा हृत्सीमकः ॥
 अपघारन्तथोन्मादो ज्वरश्च विप्रमागतः ।
 अनेकशः प्रयुक्ते तु वक्षीपलित नाशनं ॥
 वर्णतेजोवलाधानिमग्नो शोचसजीवनम् ।
 कुष्ठरोगनिहतारमारोग्यजननं शिवम् ॥
 युक्त्वलप्रनष्टस्य इन्द्रियाणाम् प्रसादनम् ।
 पिप्पल्यो हि शिवाः कायि कटुका मधुरान्वयाः ॥
 स्निग्धाश्च शीतवीर्याश्च व्यवापिभ्यो गुणान्विताः ।
 कटुकलात् कफे पथ्याः स्नेहश्च पक्वे हिताः ॥
 शैत्यात्पित्तप्रशमना युज्यन्ते सर्वकर्मसु ।
 विभ्यः प्रवर्तते चाद्यः-कल्पः पञ्चविरेभ च ॥
 षष्टको दशकशान्धो वलकालमभेत्य च ।
 क्षीरानुपानास्ताः कार्यास्तथा क्षीरोपसेवनाः ॥
 नियमश्च यथाहृष्टमाश्रीयश्च यथाश्रुतः ।
 तस्मान्नियममालम्ब्य पुरुषेण यथाक्रमम् ।
 प्रयोज्यमिदमारोग्यश्रीवलायुर्विवर्धनम् ।
 पिण्णलीवर्धमानश्च कत्योऽग्निभ्याम् प्रकल्पितः ।
 अनुमयुना प्रयाक्तव्यो यथासिद्धिमवाप्नुयात् ।
 समूलानञ्च सपञ्चाल सपर्वो सफलान्तथा ।
 कालमाचीन्य प्रत्ययां संहरेन्मतिमाव्रतः ।
 तुलापादं सुस्रञ्जं तु जलद्रोणे विपाचयेत् ॥
 चतुर्भागस्थिते तत्र तेलप्रस्थं विपाचयेत् ।
 चतुर्गुणेन पयसा कल्कां ज्ञेमान् विधानवित् ॥
 प्रपौष्टरीकम् मधुकम् राक्षामूलम् शतावरीम् ।
 विडङ्गं शतपुष्पाञ्च स्वयमगुप्ताफलानि च ॥

एतदभ्यञ्जने पाने नष्टकर्मानुवासने ।
 अशोति वातजान् रोगां सतैलमेतद्व्यपोहति ॥
 मण्डूकपर्ण्याः स्वरसः प्रयोज्यः चौरिण यष्टिमधुकस्य चूर्णम् ।
 रसं गुडं च्वास्तु समूलपुना आयुष्युदाभ्यामयनाशनि ॥
 बलाप्रिवर्णं स्मृतिवर्जनानि मेध्यानि चैमानि रसायनाणि ॥
 कल्कः प्रयोज्यः खलु शङ्खपुष्पाः मेध्याविशेषेण तु शङ्खपुष्पी ॥
 घृतमाचिकासंयुक्तं मधुकं यः पिवेन्नरः ।
 चौरानुपायो स्त्रीवर्ज्यः स जिवेच्छारदाशतम् ॥
 पचाटौ सप्तदश चापि पिप्पल्या मधुसर्पिषा ।
 रसायनगुणाग्नेयी सासमेकम् प्रयोजयेत् ॥
 तिस्रस्तिस्रन्तु पूर्वोक्ते भूताये भोजनस्य च ।
 पिप्पल्यः किङ्ककचारभाविता घृतभर्जिताः ॥
 प्रयोज्याः घृतसंमिश्रा रसायनगुणेष्विषा ।
 जितुं कार्शं च यं शोषं श्वासं हिक्कां गलामयम् ॥
 अशंसि यद्वैद्यो दीपं पाण्डुतां विषमज्वरं ।
 पीनसं स्वरभेदश्च गुन्धं वातमन्तासकम् ॥

15. AŚVINA-RASĀYANA.

प्रश्निनारसायनम् ।

तप्यमानम् तपोऽत्ययं विश्वामिवं महासुनिं ।
अश्विनी देव भिषजावचतुर्व्वरदाम् वरी ॥
 तपश्चरणस्त्रिषस्र नरसाध्यायनम् पुनः ॥
 रसायनमिदं श्रेष्ठमारोग्यवलवर्द्धनम् ।
 गौरामलकचूर्णानाम् प्रस्थः श्याच्छिगिरोऽतः ॥
 एकविंशतिराचम् तु स्वरसेनेव भावयेत् ।
 प्रस्थः पिप्पलिचूर्णानाम् प्रस्थशायोरजो भवेत् ॥
 द्वौ प्रस्थौ मधुनाः स्वातां सर्पिषयादकम् भवेत् ।
 शर्करायाश्च द्वौ प्रस्थावर्द्धप्रस्थश्च चिचकात् ॥

एतत् सन्धुत्य सन्धारम् प्रक्षिप्य घृतभाजने ।
 मासमेतत्स्थितम् बान्धे प्राश्नीयात्तु यथावलम् ॥
 पलं वा द्विपलं वाथ लिङ्घात्कल्यममुक्तवान् ।
 शतम् जीवति मिधावी वलीपलितवर्जितः ॥
 न चात्र नियमः कश्चित् स्नानभोजनमैथुने ।
 धन्यम् यशस्यमायुष्यम् कल्याणम् मङ्गलम् परम् ।
विश्वामित्रेण चाभाषातमृषिभिश्चामिपूजितम् ॥

16. A FORMULA FOR THREE DIFFERENT GRUELS.

अश्विनीयाम् यवागुघ्नयम् ।

शतपुष्पां साङ्गिं विल्वं पुष्करं चिवकं वचं ।
 बिडं सौवर्हलं चैव शङ्खवेरं सपिप्पलीम् ॥
 पलांशकं च लवणं दाडिमं तुम्बु रुनि च ।
 कुस्तुम्बुरुमजाजीञ्च समभागानि कारयेत् ॥
 तण्डुलान्यमके भटान्यवागुं साधयेद्भिषक् ।
 योनिपुलसुदावत्तै सूतकृच्छ्रञ्च साधयेत् ॥
 यावन्तो वातिका रोगाः सर्वानेतान् निवच्छति ।
एषा यवागुराख्याता अश्विना भिषजां वराश्रितिः ॥

17. THE DOCTRINE OF CHEBULIC MYROBALAN

ACCORDING TO ĀSVINS.

हरितकीकल्पः अश्विनः ।

अथातो हरितकीकल्पं व्याख्यास्यामः ।

सुखोपविष्टं ब्रह्मण्यम् अश्विनी वाक्समुत्तुः ।
 कुतो हरितकी जाता कतिद्योनिश्च कीर्तते ॥
 रसाश्च कति संख्याताः कति चोत्तरसाः स्मृताः ।
 कति नामानि वर्णां वा नास्ति नास्ति च लक्षणम् ॥

कां य रोगाच्चक्ष्मयते वर्णरूपानि कानि च ।
 केन द्रव्येण संयुक्ता कान् रोगान् शन्नियच्छति ।
 एतं प्रश्नं यथा पृष्टं भगवान् वत्सुमहंति ।
अग्निनीर्वचनम् श्रुत्वा ब्रह्मा वचनमब्रवीत् ॥
 भवद्भ्याम् यदिदं पृष्टमस्य व्याकरणम् पृथक् ।
 प्रवचाभ्यनुपूर्वेन पुद्गिरूपकरणम् + + ॥
 पपात बिन्दुर्ध्मधिन्याम् शक्रस्य पिवतोऽसृत्तम् ।
 श्रीषधिन्याम् ततः श्रेष्ठा प्रादुर्भूता हरितकी ॥
 विजया चिह्नता चैव रोहिणी पूतनास्मृता ।
 जीवन्त्यभया चैत्र सप्तयोनिर्हरितकी ॥
 अलावुहता विजया या हता सा तु रोहिणी ।
 पूतानास्थिमयी मूत्रा स्थूलमांसफलाग्रता ॥
 सुवर्णवर्णा जीवन्ती पचाथी विहता तथा ।
 अभया कालिका लोके निर्दिष्टा ब्रह्मणा पुरा ॥
 एतासां संप्रवक्ष्यामि रसवीर्यं समासतः ।
 हरितकीं पञ्चरसमुष्णामलवर्णां शिवाम् ॥
 गुणी खवणवर्जो यः हरितका निरलस्यः ।
 निरहरन्ति मलं यस्मादारोग्यायुष्यसम्भताः ॥
 शिवा क्षिप्रसमुत्था च सुपचारा सदाभया ।
 मुग्धा पुष्टिकरी चैव दरिद्राणां चिकित्सति ॥
 तद्यैव मुकुमाराणां प्रायस्ते शाय ये नराः ।
 अभया हि नृणां धन्या चिकित्सार्थं सदा हिता ॥
 सुमैत्रवां तु यः स्वादिदभयां समं हौषधाम् ।
 व्यत्यासिन च पिप्पल्यो न व्याधिर्विषहृत्त तम् ॥
 शुद्धमित्रचित्तीयो तु हं हं खादित + + ॥
 सहस्रं स समाः प्राप्य नराः सर्वामयाजयेत् ॥
 अभयां सह सुत्रैर्वा भुञ्जानो लघुभोजनं ।
 संवत्सरशतं जीवेत् प्रष्टुद विविधान् गदान् ॥
 अरोमो बलसम्पदो बलीपलितवर्जितः ।
 ओजोस्फुरी शरीरे च भवेन्नित्यं निषेविता ॥

अभयाच्च हरिद्राच्च पिप्पल्यः सैन्धवन्तथा ।
कुष्ठं चेति समायुक्तं गोमूत्रेण विरेचनम् ॥
गुडं द्राक्षारसं क्षौद्रं तथैव च हरितकी ।
एतत् काङ्गायनप्रोक्तं पेशिकानां विरेचनम् ॥

पिप्पल्यः सैन्धवं चैव विडङ्गानि हरीतकी ।
एतद्गोमूचसंयुक्तं सह्रिद्रां विरेचनम् ॥
हरितकीं समगुडं मधुना सह संयुतम् ।
युक्तो विरेचनो योगः सिद्धं स्याच्च रसायनम् ॥
सर्वरोगान्निहन्नेषा पृथ्वीक्ता हि हरीतकी ।
व्याख्यातम् तत्समासेन विसरिणापि मे शृणु ॥
विषमं च सुरानाञ्च विषम् हन्याहरीतकी ।
पाचकम् वर्धयेत्येषा गुणां चासु नियच्छति ॥
हरीतकीप्रयोगस्तु जटारान्यपि नाशयेत् ।
आयुष्य साधयत्येषा कफशराणि शोषिणाम् ॥
कासं चासञ्च हिक्कां च तमीमूर्च्छां प्रतानकम् ।
अभयां नातिवर्धते चमूमेन्द्रीमिवासूरा ॥
कामलां चैव कुष्ठाञ्च नाशयेत् हरीतकी ।
अशंसं शमनी चैव सर्वमेहविनाशनी ॥
हरीतकी प्रयोगाच्च श्रयथुः प्रविदीर्यते ।
उद्धता मरुतेनैव तोयसु + प्रवोहिताः ॥
श्लेष्मपित्तरक्तपित्ते पाण्डुरोगम् हलीमकं ।
अभया प्र + + + व्याधयस्तथा ॥
श्लेष्मप्रसीकं वैवर्ण्यं स्वरमेदमरोचकम् ।
हृदरोगं चैव मूर्च्छाञ्च हन्याहरेषा हरीतकी ॥
यथा वैश्वानरो युक्तो बलवान् वायुना भवेत् ।
तथा वीर्यसमापन्ना गुडं न स्नाहहरीतकी ॥

तत्र श्लोकाः ।

यथाकथञ्चिदगुडमिश्रितैषा पीता भिषगवाप्यद्यबापि लीढा ।
दुरासदाम् यैव चिरस्थितम् य गदाधरानामगदान करोति ॥

न सोऽस्ति रोगो भुवि मानवानाम्, हरितकीर्णं न जयेत् प्रसह्य।
 यशस्विनीन्मामस्तप्रसृता प्रयोऽर्ज्यत् सर्व्वत एव धीरः ॥
 हितं हयानाम् लवणं प्रशस्तं जलं राजानां ज्वलनं गवाक्ष।
 हरितकीर्णं हतमा नराणां चिकित्सा ते पञ्चजयोनिराह इति ॥

हरितकीकल्पः आश्विनः ॥

18. VRHAT GUḌA PIPPALĪ

वृहदगुडपिप्पली ।

विडङ्गं तुषणं हिङ्गु, कुष्ठं लवणपत्रकं ।
 त्रिधारं फेणकं चव्यं सेयसी कृष्णजीरकं ।
 तालपुष्पोद्भवं चारं नाद्याः कुष्माण्डकस्थच ।
 अपामार्गोद्भवं चारं चिन्थायाः चित्रकन्तथा ।
 पतानि समभामानि पुराणो द्विगुणो गुडः ।
 गुडतुल्यं प्रदातव्यं चूर्णं चैव कणोद्भवं ।
 मर्दयित्वा दृढे पात्रे मीदकानुपकल्पयेत् ।
 भक्षयेद्द्वैवेन्नित्यं ग्रीहानं हन्ति दुस्तरं ।
 प्रमेहं पान्दुरोगश्च कामलं वज्रिमान्द्रकं ।
 यक्तं पञ्चगुल्फश्च तूदरं सर्व्वरूपकं ।
 जीर्णज्वरं तथा शीघ्रं कासं पञ्चविधन्तथा ।
 अश्विभ्यां निर्दिता ह्येषा सुवृहदगुडपिप्पली ॥

19. PHALA GHRTA.

फलघृतम् ।

मञ्जिष्ठा मधुकं कुष्ठं विफला शर्करा वचा ।
 भजमीदा हरिद्रे ह्ये हिङ्गु तिक्तकरोहिणी ॥
 काकोली चीरकाकोली मूलं चैवाश्वगन्धजम् ।
 जीवकर्षभकौ मेदे रणका वृहतीदयम् ॥
 उत्पलं चन्दनं द्राक्षा पद्मकं देवदारु च ।
 एभिरक्षसभैर्भागेर्घृतप्रस्थं विपाचयेत् ॥

चतुर्गुणेन पयसा विपचेन्मृदुनाऽग्निना ।
 एतच्छर्पिर्नरः पीत्वा स्त्रीषु नित्यं वृषायते ॥
 पुत्रं जनयते वीरं मेधाकां पुष्करिण्यम् ।
 बन्धा च लभते गर्भं श्यामा विगात्रस्यते ॥
 या चैव स्थिरगर्भास्याम्भृतापत्या तु या भवेत् ।
 अल्पायुर्जननी चैव या च मृत्वा पुनः स्थिता ॥
 एतदेव कुमाराणां सर्वाङ्गयज्ञमोक्षणम् ।
 धनं यशस्वमायुष्यं कानिलावण्यपुष्टिदम् ॥
 ये च कल्याणके प्रोक्तास्ते चापौष्ट गुणाः कृताः
ऐतत्फलघृत नाम सन्निभ्यां परिकीर्तितम् ॥

20. AMṚTĀ GUḢGULU.

अमृतागुग्गुलुः ।

प्रस्थमेकं गुडूच्यात् अर्द्धप्रस्थञ्च गुग्गुलीः ।
 प्रत्येकं त्रिफलायाश्च तत्प्रमाणं विनिर्दिशेत् ॥
 सर्वमेकञ्च संक्षुध्य साधयेत् त्वर्मेणोऽभसि ।
 पादशेषं परिखाव्य पुनरग्रावधिशयेत् ॥
 तावत् पचेत् कषायन्तु यावत् सान्द्रत्वमागतम्
 दन्तीव्योषविडङ्गानि गुडुचीत्रिफलाश्च ॥
 ततश्चार्द्धफलं पूतं मृत्नीयाच्च प्रति प्रति ।
 कर्षन्तु त्रिदश्यास्तु सर्वमेकञ्च कारयेत् ॥
 तस्मिन् सुसिद्धं विश्राय कवीर्णे प्रलिपेद् बुधः ।
 ततश्चाग्निबलं ज्ञात्वा तस्य मात्रां प्रदापयेत् ॥
 वातरक्तं तथा कुष्ठं गुदजान्ध्रिसादनम् ।
 दुष्टव्रणप्रमेहाश्च सामवातं भगन्दरम् ॥
 नाद्यात्वावातश्चयथुन् सर्वानेतान् व्यपोहति ।
अग्निभ्यां निर्मितः पूर्वममृताख्यो हि गुग्गुलुः ।
अर्द्धप्रस्थं त्रिफलायाः प्रत्येकमिह मृच्छते ॥

21. AMRTĀDYA GHŪṬA.

अमृताद्यं घृतम् ।

अमृता मधुकं द्राक्षा विफला नागरं बला ।
 वासारस्वधह्योर-देवदारुत्रिकण्टकम् ॥
 कटुका सवरी कृष्णा काश्वर्यस्य फलानि च ।
 रास्त्राक्षुरकगन्धर्व-हृल्लदारघनोत्पलैः ॥
 कल्मैरभिः समैः कृत्वा सर्पिःप्रस्थं विपाचयेत् ।
 धात्रीरससमं दत्त्वा वारिद्विगुणसंयुतम् ॥
 सम्यक्सिञ्जन्तु विश्राय भोज्यपाने प्रशस्यते ।
 वधुदोषान्वितं वातं रक्तेन सह मुञ्चिष्यते ॥
 उत्तानाद्यापि गन्धौरं त्रिकजङ्घोरुजानुजम् ।
 क्रोष्टूशीर्षं महाशूले चामवाते सुदारुणे ॥
 वातरीगोपसृष्टस्य वेदनाद्यापि दुस्तराम् ।
 मूत्रकृच्छमुदावर्त्तं प्रमेहं विषमज्वरम् ॥
 एतान् सर्वान् निहन्त्याय वातपित्तकफोद्भवान् ॥
 सर्वकालोपयोगिनं वर्णायुर्वलवर्द्धनम् ।
 अश्विभ्यां निर्मितं श्रेष्ठं घृतमेतदनुत्तमम् ॥

22. AMRTAPRĀŚ AVALEHA.

अमृतप्राशवलेहः ।

क्षीरं धात्री च मल्लिष्ठा क्षीरिणाश्च तथा रसेः
 पचितं सुमेधुतं प्रस्थं मधुरैः कर्षसम्भितैः ॥
 द्राक्षा द्विचन्दनीक्षीरैः शर्करोत्पलपद्मकैः ।
 मधुकज्जुसमानन्ता काश्वरी लृणसंज्ञकैः ॥
 प्रस्यार्धं मधुनः श्रौते शर्करार्द्धतुलां तथा ।
 पलार्द्धिकांश्च सखुख्यं त्वगीलापद्मकेशरान् ॥
 विनीय तच्च संलिङ्घ्यान् मावात् नित्यं सुयन्त्रितः ।
 अमृतप्राशमित्येतदमश्विभ्यां परिकीर्तितम् ॥

चीरमांसाग्निनां हनि रक्तपित्तं चतस्रयम् ।
 लम्बाश्चित्रासकासकृद्धिं मूर्च्छां प्रमहं नम् ॥
 मूलकञ्ज्वरघ्नश्च वल्यं स्त्रीरतिवर्धनम् ॥

23. PUNARNAVĀ GUGGULU.

पुनर्नवागुग्गुलुः ।

अमृतायाश्च विप्रस्थं प्रस्थमेकश्च गुग्गुलोः ।
 प्रत्येकं विफलाप्रस्थं वर्षाभूप्रस्थमेव च ॥
 सर्वमेतच्च संचुद्य काथयेद्वल्लनेऽभसि ।
 पुनः पचेत् पादशेषं यावत् सान्द्रत्वमागतम् ॥
 दन्तीचिवकमूलानां कणाविश्वफलविकम् ।
 गुडुचीलम्बिङ्गानां प्रत्येकार्धपलान्मिश्रितम् ॥
 विष्टताकर्षमेकान्तु सर्वमेकत चूर्णयेत् ।
 सिद्धे चोष्णे चिपेत् तच्च अमृतागुग्गुलोः परम् ॥
 यथा चाग्निबलं खाद्विदम्बपिचौ विशेषतः ।
 वातरक्तं तथा कुष्ठं गुदजान्वद्रिसादनम् ॥
 दुष्टव्रणप्रमेहान्य सामवातं भगन्दरम् ।
 नाद्याव्यवातं श्रयथुन् हन्यात् सर्वामयानयम् ॥
 अग्निभ्यां निर्मिती स्त्रीषोऽमृताख्यो गुग्गुलुः पुराः ।

24. KUNĀKUMĀDYA TAILA.

कुङ्कुमाद्यं तैलम् ।

कुङ्कुमं चन्दनं लाक्षा मञ्जिष्ठा मधुयष्टिका ।
 कालीयकमुदीरश्च पञ्चकं नीलसुतपलम् ॥
 न्यशोधपादाः प्रचक्ष्य शृङ्गाः पद्मस्य केशरम् ।
 द्विपञ्चमूलसहितैः कषायेः पलिकैः पृथक् ॥
 जलादकं विपक्तव्यं पादशेषमद्योऽरेत् ।
 मञ्जिष्ठा मधुकं लाक्षा पञ्चकं मधुयष्टिका ॥

कर्षप्रभाषैरेतैस्तु तैलस्य कुङ्कुमं पचेत् ।
 अजाचीरं तद्विगुणं शनैश्च हस्तिना पचेत् ॥
 सम्यक् पक्वं परं ह्येतन्मुखवर्णप्रसादनम् ।
 नीलिकापिङ्गकाव्यङ्गानभ्यङ्गादेव नाशयेत् ॥
 सप्तरावप्रयोगेण भवेत् काचनसन्निभम् ।
कुङ्कुमायमिदं तैलमश्विभ्यां निर्मितं पुरा ॥

25. GODHUMĀDYA GHṚTA.

गोधूमाद्यं घृतम् ।

गोधूमान् पलशतं निष्काप्य सलिलाढके ।
 पादावशेषे पूते च द्रव्याणीमानि दापयेत् ॥
 गोधूमसुस्नातफलं माषा द्राक्षा परुषकम् ।
 काकोली चीरकाकोली जीवन्ती सशतावरी ॥
 अश्वगन्धा सखर्जुरा मधुकं दूषणं सिता ।
 भल्लातकं स्वयंगुप्ता समभागानि कारयेत् ॥
 घृतप्रस्थं पचेद्देवं चीरं दत्त्वा चतुर्गुणम् ।
 सहस्त्रिणाऽथ सिंहे च द्रव्याण्येतानि निक्षिपेत् ॥
 त्वर्गेलि पिप्पली धान्यं कर्पूरं नागकेशरम् ।
 यथालाभं विनिक्षिप्य सिताचीद्रपलाष्टकम् ॥
 दध्ने च दुग्धेनाऽऽलोढ्य विधिवद्विनियोजयेत् ।
 शाल्योदनेन मुञ्जीत पिविन्नांसरसेन वा ॥
 केवलस्य पिवेदस्य पलमात्रं प्रमाणतः ।
 न तस्य लिङ्गशैथिल्यं न च शुक्रवयो भवेत् ॥
 बल्यं परं वातहरं शुक्रमंजननं परम् ।
 मूदक्लृप्तप्रशमनं वृद्धानामपि शस्यते ॥
 पलद्वयं तदश्रीयाद्दशरावमतन्द्रितः ।
 स्त्रीणां शतं च भजते पीत्वा चानुपिविष्यः ।
अश्विभ्यां निर्मितं चेतद्गोधूमान्यां रसायनम् ॥

26. MAHA-SUGANDHI OIL.

महासुगन्धितैलम् ।

कर्पूरागुरुचोचबोलनलिकालासाशठीधातकौ-
 पुष्पैः सप्तदलैलवालुसरलाशैल्यमांसीपुरैः ।
 एलाकुङ्कुमरोचनादमनकश्रीवासजातीफलैः
 कङ्कोलतमुकोजटामदमुराकान्तालवङ्गामयेः ॥
 तेलोश्रीरहरेषुकामलयजस्यौघयच्छानखै-
 र्जातीकोशकुलौरपद्मकनतैः स्पृक्षान्वितैः पालिकैः ।
 लाचायोजनवह्निप्रसलिलि तैलं विपाच्याऽऽढकं
 तेनाभ्यज्य तनुं जरन्नपि भवेत्स्त्रीणां परं वल्लभः ॥
 शुक्राण्यो द्युतिमाननल्पतनयः षण्डोऽपि रत्युत्सुकौ
 वन्ध्या गर्भवती भवेदपि तथा वृद्धाऽपि सृते सुतम् ।
 कण्डूस्वेदविचर्चिकामयहरं दीर्गम्यकुष्ठापङ्क-
 मन्त्रिभ्यां परिकीर्तितं बहुगुणं तैलं सुगन्धं महत् ॥

27. GUḌAKUSMĀNDA.

गुडकुष्माण्डम् ।

कुष्माण्डकात्पलशतं सुखिघ्नं निष्कलीकृतम् ।
 प्रस्थं च घृततैलस्य ताभ्यस्तप्ते प्रदापयेत् ॥
 त्वक्पक्वधान्यकव्योषजीरकैलाहयानलम् ।
 शयिकं चव्यमातङ्गपिप्पल्यः शृङ्गवेरकम् ॥
 शृङ्गाटकं कसेरुं च प्रलम्बं तालमसकम् ।
 चूर्णैकृतं पलाशं तु गुडस्य तुलया पचेत् ॥
 शीतौभूते पक्षान्यष्टौ मधुनः संप्रदापयेत् ।
 कफपित्तानिलहरं मन्दाग्रीणां च दीपनम् ॥
 कृशानां वृंहणं श्रेष्ठं वाजीकरं सुतप्तम् ।
 प्रमदासु प्रसक्तानां ये च स्युः शीतरेवराः ॥
 चयेषु च गृहीतानां परमेतद्भिन्नमित्तम् ।
 कासं त्रासं ज्वरं हिक्कां हृन्निच्छद्भिर्मरोचकम् ॥

गुडकूष्माण्डकं ख्यातमग्निभ्यां समुदाहृतम् ।

खण्डकूष्माण्डवत्यां स्निग्धकूष्माण्डकद्रवः ॥

KUṢMĀNDAKA RASĀYANA.

कूष्माण्डकरसायणम् ।

वीतलग्नस्थिकूष्माण्डतुलां स्निग्धां पुनः पचेत् ।

घट्टयन् सर्पिषः प्रस्थे चैद्रवस्येव च क्षिपेत् ॥

खण्डाच्छतं कणाग्रच्छोर्दिपलं जीरकादपि ।

त्रिजात-धान्य-सरिचं पृथग्धं पलांशकम् ॥

श्वसारितशीते च दत्त्वा चौद्रं हृतार्धकम् ।

खजेनामथ च स्थाप्य तन्निहन्तुः पयोजितम् ॥

कामद्विकृज्वरान्धरक्तपित्तचतुश्चयान् ।

उरःसन्धानजननं मेधास्मृतिबलप्रदम् ।

अग्निभ्यां विहितं हृद्यं कूष्माण्डकरसायणम् ॥

28. VRĪHAT NĀRIKELA KHANḌA.

वृहन्नारिकेलखण्डः ।

प्रस्थानु नारिकेलस्य सूक्ष्मं हृषदि पेयितम् ।

निष्कूलोकृत कूष्माण्ड खण्डानामर्द्धमादकम् ।

तद्वयं भव्यं येद्वयं घृते तु कुड्बोष्मते ॥

ततस्तत्र क्षिपेच्छुद्धं गौदुग्धश्चादकोन्मितम् ।

तदैव निःक्षिपेद्व्यां सितां प्रस्थद्वयोन्मिताम् ॥

पचेत् सर्वानि चैकत्र सदुना वज्रिना भिषक् ।

मुपके शीतले तत्र चूर्णीकृत्य विनिःक्षिपेत् ॥

सूक्ष्मेलाधान्यकं धात्री पर्यटञ्जलदं जलम् ।

उशीरं चन्दनं द्राक्षां शृङ्गाटश्च कशीरुकम् ॥

त्वक्पत्रकं सकर्पूरं कर्पयुग्मं पृथक् पृथक् ।

सर्वं संमिश्रयेद्वचेद् भाजने स्रक्ष्ये नवे ॥

पलमात्रमिदं प्रातर्भक्षयेद्वा यद्यानलम् ।
 एतन्निषेवितं हन्ति रोगानेतान्न संशयः ॥
 अस्त्रपित्तं ज्वरं पित्तं रक्तपित्तमरोचकम् ।
 वातरक्तं लघां दाहं पाण्डुरोगञ्च कामलाम् ॥
 चयं चपयति क्षिप्रं शूलञ्च परिणामजम् ।
 नारिकेलस्य खण्डोऽयमश्विभ्यां भाषितः पुरा ॥
 वर्षादौ वृंहणी हृष्यः पुंस्तुनिद्रा बलप्रदः ।

29. DĀPIMĀDYA GHṚTA.

दाडिमाद्यं घृतम् ।

दाडिमस्य फलप्रस्थं यवप्रस्थौ तथैव च ।
 कुलत्थकुङ्कुवचापि क्वाथयित्वा यथाविधि ॥
 तेन पादावशेषेण घृतप्रस्थं विपाचयेत् ।
 चतुःषष्टिपलं क्षीरं क्षीरतुल्यं वरीरसम् ॥
 दत्त्वा मृदग्निना कल्कैरचमात्रायुतैः सह ।
 द्राक्षाखर्वुरकाकोली-दन्तीदाडिमजीरकैः ॥
 तथा मेदामहामेदा विफलादारुरेणुकैः ।
 विशालारजनीदारु-हरिद्राविकषामयैः ॥
 क्रिमिघ्नभूमिकुष्माण्ड-श्यामैलाभिर्भिषग्वरः ।
 पाने भोज्ये प्रदातव्यं सर्व्वर्त्तुषु च मात्रया ॥
 प्रमेहान् विंशतिष्वेव सूत्राघातांस्तथाग्निरोम् ।
 कृष्णं सुदारुणञ्चैव हन्यादेतद्रसायनम् ॥
 शूलमष्टविधं हन्ति ज्वरमष्टविधं तथा ।
 कामला पाण्डुरोगांश्च हलीमकमथारुचिम् ॥
 श्लोपदञ्च विशेषेण घृतेनानेन नश्यति ।
 श्रद्धमायुष्यमोजसां सर्व्वरोगहरं परम् ।
 दाडिमाद्यमिदं नाम अश्विभ्यां निश्चितं महत् ॥

30. ŚATĀVARĪ GHṚTA.

शतावरीघृतम् ।

शतावरीमूलशतं बिद्रोहेऽपां विपाचयेत् ।
 अष्टभागावशेषेण घृतप्रस्थं विपाचयेत् ॥
 जीवनीयानि सर्वाणि रास्त्रा गोलुरकं तथा ।
 शतपुष्पा वचा कृष्टं सरलं सपुनर्नवम् ॥
 चन्दनं तगरं मांसी पद्मकं रक्तचन्दनम् ।
 सुरसं नागरं कृष्णा विडं नागरमुत्पलम् ॥
 एभिरचसमेर्भागैः क्षीरं दद्यात्तत्तुर्गुणम् ।
 हृहणं वातपित्तघ्नं क्षतशोषज्वरापहम् ॥
 पङ्कनां वृहस्पृणामर्दितानां च शस्यते ॥
 पुंस्त्वोपघातिनां नृणां बन्धनां चैव योजितम् ।
 बलवर्णकरं हृतिदलक्षोघ्नं प्रजाकरम् ।
 शतावरीघृतमिदमश्विभ्यां परिकीर्तितम् ॥

31. HINGVĀDYA POWDER.

हिङ्गवाद्यं चूर्णम् ।

हिङ्गुयन्त्रिकधान्यकाश्रिकवचाचव्याघ्रिपाठाः सठौ
 ह्रस्वास्त्रं लवणतयं चिकटुकं चारवयं दाडिमम् ।
 पथ्यापुष्करवेतसास्त्रहृषाजाज्याजगन्धैः कृतं
 चूर्णं भावितमेतदारुकरसे स्वाहीजपूरस्य च ॥
 आश्वानयहणीविकारमुदजान् गुब्बालुदावर्तकान्
 प्रत्याश्वानगरोदरास्त्ररिक्तजलूषौह्यारोचकान् ।
 ऊरुसाम्भमतिस्त्रयं च मनसो वाधिर्यमष्टौलिकां
 प्रत्यष्टौलिकया सङ्घापहरति प्राक्पौतमुष्णाम्बुना ॥
 रुक्नुक्षिवङ्गकटोजठरान्तरैषु
 वस्तिस्तनांसफलकेषु च पार्श्वयोश्च ।
 यस्त्वानि नाशयति वातवत्सासजानि
 हिङ्गवाद्यमाद्यमिदमाश्विनसंहितायाम् ॥

32. DAŚAṆGA OIL.

दशाङ्गतेलम् ।

श्रेयकोऽस्तलता वाजिगन्धा शतावरी ।
 प्रसारणी नागबला अदंष्ट्री सपुनर्मवा ॥
 बला चेति समान् भागान् रास्त्रारससमन्वितान् ।
 विज्ञाय दोषप्रकृतिं कषायमुपकल्पयेत् ॥
 तेन पादावशेषेण तिलतेलाढकं पचेत् ।
 दधिमस्त्रिचुनिर्यासशुक्लाचोदकैः समैः ॥
 चतुर्गुणेन पयसा कल्कै रेभिर्पलोन्मितेः ।
 मांसीशताह्वामधुकमञ्जिष्ठारक्तचन्दनैः ॥
 शतावरीद्विदारुकौन्तीत्वक्पत्रवारिजेः ।
 कुष्ठारुवचायुक्तैस्तैलं सिद्धं प्रदापयेत् ॥
 वस्त्री पाने तथाऽभ्यङ्गे नस्ये च परिषेचने ।
 सर्वरोगान् जयत्येतत्संस्तुष्टान् सातरिचनान् ॥
 विशेषतो ह्यप्यग्नारमुन्यादं वातशोणितम् ।
 स्त्रीशामपत्यजननं पुंसां चातिबलप्रदम् ॥
 नराणां गदगदानां च सूकानां वाक्प्रवर्तनम् ।
 मेघाजननमायुष्यं बलवर्णाग्निवर्धनम् ॥
 सर्वयष्ट्यं विप्रजित् सन्निपातहरं परम् ।
 दशाङ्गमिति विख्यातमग्निभ्यां परिकीर्तितम् ॥

33. VRHAT AGNIMUKHA POWDER.

वृहदग्निमुखं चूर्णम् ।

ह्रीं चारौ चित्रकं पाठा गिडङ्गं लवणानि च ।
 तूष्णला तमरं भागी कारवी हिङ्गु पौष्करम् ॥
 सठी दावीं चिहम्बुला वचा चेन्द्रयवाक्ष्णया ।
 धात्रीजौरकहवास्त्रयेयस्यः सीपकुञ्चिकाः ॥

अम्लवैतसमस्त्रीका दाडिमं सकटुचयम् ।
 भग्नातकाजमोदं च यवानी सुरदारु च ॥
 अभयाऽतिविषा चव्या हृष्यारग्वधस्तथा ।
 तिलमुष्ककशिशूणां कोकिलाचपलाशयोः ॥
 चाराण्यमूनि तुल्यानि सूक्ष्मचूर्णानि कारयेत् ।
 लोहकिट्टं च सप्ताहं तप्तं गोमूवसिञ्चितम् ॥
 विद्वान्सुभावितं कृत्वा योगेऽस्त्रिग्विप्रपित्ततः ।
 मातुलुङ्गरसिनैव भावयेत्तु दिनवयम् ॥
 दिनचयं तु शक्तेन तथाऽऽर्द्रकरसेन च ।
 सुभावितं ततः कृत्वा भक्तमध्ये प्रयोजयेत् ॥
 एषोऽग्निकल्पचूर्णस्तु नाशयत्यचिराद्गदान् ।
 अजीर्णकं तथाऽऽनाहं पञ्च गुल्यान् सुदुस्तराम् ॥
 यहणीपाण्डुरोगांश्च त्रासकासांश्च दारुणाम् ।
 अपस्मारं तद्योग्मादं विश्वम् च मदात्ययम् ॥
 प्रणदत्युल्लणानेतान्नटमग्निं च दीपयेत् ।
 समस्तव्यञ्जनोपेतं भक्तं कृत्वा तु भोजने ॥
 प्रदद्यादस्य चूर्णं विडालपदकं भिषक् ।
 ततस्तद्वतां याति कीर्णत्वं च प्रपद्यते ॥
 एतदग्निमुखं चूर्णं चूर्णराजो निगद्यते ।
ब्रध्मणा निर्मितं ह्येतदग्निभ्यां परिकीर्तितम् ॥

34. CITRAKA-HARITAKĪ AVALEHA.

चित्रकहरीतकवलेहः ।

चित्रककषायपलशतमस्तथाधात्रीरसं च तुल्यांशम् ।
 संमिश्रा गुडशतं च हि द्विपथमूलोकाषायेण ॥
 तत्तुल्येन हरीतकाऽऽक्रमिकं विपाथ्य गुडपाकम् ।
 अर्धप्रस्थं मधुनस्तस्मिन्दत्त्वा ततोऽन्येद्युः ॥
 हे हे पत्नी निदध्यादेलालक्पवचिकटुकानाम् ।
 सयवचारार्धपलं यथाग्निं पथाग्रयुञ्जीत ॥

एतद्रसायनोत्तममश्विभ्यामग्निहव्ये ग्रीकम् ।
 उपयुक्तवतां पुंसामपि काष्ठवृक्षानि जीर्यन्ति ॥
 अश्वः श्वासभगन्दरकासकृमिशोफकुष्ठगुल्माश्च ।
 मासद्वयोपयोगादिदिनाश्रयत्वन्वह्निमपि ॥
 रोगानीकसमेतं विशेषतो हन्ति राजयक्षाणाम् ।
 अजितमपि भेषजशतैः पीनसरीरं च गृह्णाज्जयति ॥

35. HARITAKĪ AVALEHA.

(This formula has been quoted in page 110.)

HARITAKĪ AVALEHA II.

द्वितीयचित्रकहरीतकखलिहः ।

चित्रकपलशतमभिनवमाहृत्य कषायमेव कुर्वीत ।
 धात्रीरसस्य पलशतमसृतायाः स्वरसमेव तत्तुल्यम् ॥
 दशमूलस्य पलशतमष्टाविंशत्तथा जलद्रोणे ।
 अभयाढकं च भिषजा साध्यं पूते कषायेऽस्मिन् ॥
 शृङ्गुडस्य शतं स्वाद्रसेन चालोष्य सपदि तवैव ।
 अभयाद्य ताः समस्ता सृदुना ज्वलनेन मार्दवं नेयाः ॥
 मधुनः पलानि षोडश तस्मिन्देयानि शीतलीभूते ।
 त्वक्पुवमरिचकैसरमामधिकैलापली द्वे स्युः ॥
 यवचारपलैकमेतत्प्राग्वाग्निमाचया विहान् ।
 जरयति दृषकाष्ठान्यपि विसप्तदिवसोपयोगेन ॥
 कासश्वासभगन्दरकुष्ठान्यष्टादशोदराण्यष्टौ ।
 मासोपयोगादेतत्त्वत्तद्यं हन्ति राजयक्षाणाम् ॥१२८॥
 घण्टोऽप्यघण्टतां च याति वर्षमात्रोपयोगेन ।
 सुरलीकरीगनिचयप्रश्मनकरणैकलक्षमाहृत्यै ॥
 दिव्यं रसायनमिदं कृतवन्तावश्विनी देवी ।

36. CITRAKA AVALEHA.

चित्रकावलीहः ।

वङ्गिपञ्चमूलस्य काथे पलशतद्वये ॥
 अमृताया * रसस्यैके पूतेऽग्निद्रवभाशतम् ।
 पचिद्भुङ्क्तुलां तावदावदापाकलक्षणम् ॥
 अन्वेद्युक्ताव मधुनः मुशीते कुडवद्वयम् ।
 प्रक्षिपेन्निमग्नस्य त्रिकटोय पलद्वयम् ॥
 प्रत्येकं स्यादवधारः शुक्तिस्तस्मिन्वसायने ।
 उत्तमं कथितं पुंसामन्विभ्यामग्निव्रजये ॥
 जीर्यन्त्यपि च काष्ठानि कासश्वासक्षयकमीन् ।
 गुल्मीदरार्शःकुष्ठं च जयैच्छीषं भगन्दरम् ॥
 योगशतेरप्यजितं त्राहाज्जयति पौनसम् ।

37. SVALPA KADALĪKANDA GHṚTA.

स्वल्पकदलीकन्दघृतं ।

कदलीकन्दं निर्यासे तत्प्रसूनं तुलां पचिन् ।
 तेन पादावशेषेण वस्त्रपुतेन यवतः ॥
 त्ववज्ञं कदलीं देवकाष्ठं मधुरिकान्तथा ।
 रजनीं चविकाजाजीं नागरं विफला कथा ॥
 दाडिमस्य च वोजानि यमानौ धाम्यकन्तथा ।
 हवास्त्रभकणाद्राक्षसिन्धूद्वयसमन्वितैः ॥
 कल्कैरक्षसमैरेभिर्धृतप्रस्थं विपाचयेत् ।
 पानभोज्यं प्रदातव्यं सर्वत्र घृतमाचया ॥
 प्रमेहान् विंशतिञ्चैव दाह शोष कृषा स्तथा ।
 विवर्हानाहशूलघ्नं कामलाज्वरनाशनं ॥
 वातरोगं निहन्त्याशु हृत्तमिन्द्राग्निर्यथा ।
 कदलीकन्दकं नाम अश्विभ्यां निर्मितः पुरा ॥४८॥

* 'पलशते' इति शेषः ।

38. AYOPATI RASA.

अयःपतिरसः ।

चिह्नता सर्वभागानि सर्वे सर्वे च शर्करा ॥

उष्णोदकालुपानेन इच्छामिदौ रसः श्रुतः ।

अयःपतिरसो नाम अश्विनीदेवनिर्मितम् ॥

39. MĀRTAṆḌA RASA.

मार्तण्डरसः ।

बहुमूलहरं चैव तिलपिष्टेन संयुतम् ॥

मार्जालयन्त्रिरोगाणां गुलूचीमरिचं तथा ।

शुक्रवृक्षिस्तम्बमूलमिशुरस्वरसं तथा ॥

आरुची आर्द्रकं चैव जीरकं चूर्णसंयुतम् ।

पेरङ्गी व्याधिमूलैर्न अपत्यं हितमेव च ॥

भरणीचणकाब्दे न सर्वरीगो व्यपोहति ।

मार्तण्डरसनामायमश्विनीदेवनिर्मितः ॥

40. VĀLA SŪRYYODAYA.

वालसूर्योदयः ।

मणिराजशतं नागं वैगन्धरसं समम् ।

स्वर्णप्रभं गन्धकार्धं तदर्धं करवीरकम् ॥

सु शु. सुमद्रावैः कुमारौरसमेव च ।

जम्बीरास्त्रे न प्रत्येकं मर्दितं च दिने दिने ॥

सूषायां निक्षिपेत्सर्वं बालुकायन्त्रपाचितम् ।

गुञ्जामात्रप्रयोगेण विंशतिर्मेहकुष्ठकम् ॥

मूलकृष्णाणि सर्वाणि द्वादशं शयमेव च ।

* * *

वालसूर्योदय नाम अश्विनीदेवनिर्मितम्

CHAPTER IV

Kaśyapa

Kaśyapa's father was the sage Marici and his mother Kalā. He married the seventeen daughters of Dakṣa, and became the progenitor of all living beings:

Name of wife.	Sons.
1. Aḍiti	Devas (Gods)
2. Diti	Daityas (Asuras)
3. Danu	Dānavas (Demons)
4. Kāśṭhā	Aśvas (Horses)
5. Ariṣṭā	Gandharvas
6. Surasā	Rākṣasās
7. Ilā	Vṛkṣa (Trees)
8. Muni	Apsarās
9. Krodhavaśā	Sarpas (Snakes)
10. Tāmrā	Syena, Gṛdhras (Falcons)
11. Surabhi	Go-Mahiṣas (Cows)
12. Saramā	Śvāpadās (Dogs)
13. Timi	Jādos (Fishes)
14. Vinatā	{ Garuḍa { Aruna (Sun)
15. Kadru	Nāgās (Serpents)
16. Pataṅgi	Pataṅgas (Insects)
17. Jāmini	Śalabhās (Locusts).

Kaśyapa is the name of an ancient physician who was present in the meeting of the sages mentioned in Caraka Saṁhitā I. i. In IV. vi, Kaśyapa appears to have solved the problem in relation to the part formed first in a foetus. He said: "All parts of the foetus are formed

simultaneously and the development of the parts are interdependent.”

कश्यपः सर्वाङ्गनिर्वृत्तिरिति । तदुपपन्नं सर्वाङ्गानां तुल्यकालाभिनिर्वृत्तत्वात्
हृदयप्रभृतीनाम् । सर्वाङ्गानां ह्यस्य हृदयं मूलमधिष्ठानञ्च केषाञ्चिद्भावानां न च तस्मात्
पूर्वाभिनिर्वृत्तिरिषान्त्यावृद्धयः पूर्वाङ्गां सर्वाङ्गानां तुल्यकालातिनिवृत्तिः सर्वाभावा
ह्यन्योन्यप्रतिवद्भास्तस्माद् यथाभूतं दर्शनं ।

In *Aṣṭāṅga Hṛdaya Saṁhitā* VI. ii, he is called *Vṛddha Kāśyapa* or *Kāśyapa* the old, and therein a formula is ascribed to him as a remedy against children's diseases caused by teething. Similarly in VI. iii, a formula of his is quoted as a remedy against “*Vālagraha*” or “demoniacal seizure of children.” From these facts, it becomes apparent that *Kāśyapa* was a specialist in pediatrics. Again in the *Bower Ms.*, there is a formula to give relief to children suffering from gravel, stone, strangury and morbid secretion of urine. This is also ascribed to him.

Hoernle thinks *Kāśyapa* and *Kāśyapa* are the names of the same ṛshi; but in *Caraka Saṁhitā*, I. i. both the sages are separately mentioned and we find *Kāśyapa* quoted in *Caraka Saṁhitā*, IV. vi and *Aṣṭāṅga Hṛdaya Saṁhitā*, VI. ii and VI. iii (see footnote) *Bower Ms.*, p. 170).

Formulae : The following formulae are ascribed to *Kāśyapa*.

1.

समङ्गा-धातक्री-लोभ्र-कुटन्नट-बलाहयेः ।

महासङ्गा-चुद्रसङ्गा-चुद्रविल्लशलाटुभिः ॥

सकार्पासोफलेस्त्रोये साधितैः साधितं घृतम् ।

धीरमस्त्युतं हन्ति शीघ्रं दन्तोद्वीहवान् ।

विविधानामयानेतद् हस्तकश्यपनिर्मितम् ॥

2. DAŚĀṆGA DHUPA.

दशाङ्ग धूपम् ।

वचा-हिङ्ग-विडङ्गानि सैन्धवं गजपिप्पली ।

पाठा प्रतिविषा व्योषं दशाङ्गं कश्यपोदितः ॥

Ibid, VI, iii, p. 29, v. 46.

This formula is another recension of Dasāṅgamagada, quoted on page 185 and ascribed to Kāśyapa in the Bower Ms.

KĀŚYAPA, THE ELDER

Kāśyapa is the name of an ancient physician. He is the son of Kaśyapa and is the founder of the clan (गोत्र) which still bears his name. According to Trikāṇḍaśeṣa, Kāśyapa is the name of sage Kaṇāda, the founder of the atomic theory. In the Caraka Saṁhitā I.i, his name appears in the list of sages who were desirous of learning the medical science.

विघ्नभृता यदा रोगाः प्रादुर्भूताः शरीरिणाम् ।
तपोपवासाध्ययनव्रतार्थव्रतायुषाम् ॥
तदा भूतेष्वनुक्रौशं पुरस्कृत्य मङ्गपथः ।
समेताः पुण्यकर्माणाः पार्थे हिमवतः शुभे ॥
अङ्गिरा जमदग्निश्च वशिष्ठः काश्यपो भृगुः ।
आत्रेयो गीतमः साङ्गः पुलस्त्यो नारदीऽसितः ॥
अगस्त्यो वामदेवश्च मार्कण्डेयाश्चलायनौ ।
पारिचिर्मिचूरात्रेयो भरद्वाजः कपिल्लः ॥
विश्वामित्राश्चरथ्यौ च भार्गवश्च वनोऽभिमित् ।
गार्ग्यः शाण्डिल्यकौण्डिल्यौ वारिचिर्देवलगालवी ॥
साङ्गुत्यो वैजवापिश्च कुशिको वादरायणः ।
वज्रिणः शरलीमा च काप्यकात्यायनायुभौ ॥
काण्डायनः कैकशेयो धीम्यो मारीचिकश्चपौ ।
शर्कराची हिरण्मयी लोकाचः पैङ्गिरेव च ॥
शौनकः शाकुनियश्च मैत्रेयो सैमतायनिः ।
वैश्वानसा वालखिल्यास्तथा चान्ये मङ्गपथः ॥

In I. xii he is again referred to as holding a discussion with the other sages on the qualities of Vāyu and as having

put forward the view that Soma is the real cause of health and disease by its action on the phlegm of the body. The healthy and the diseased conditions are : Firmness and laxity, growth and leanness, activity and idleness, virility and impotence, knowledge and ignorance, etc.

तच्छ्रुत्वा मारौचिवचः काश्यप उवाच । सोम एव शरीरे श्रेष्ठान्तर्गतः
कुपिताकुपितः शुभाशुभानि करोति । तद्यथा—दाह्यं शैथिल्यमुपचय काश्यं सुखाह-
मालसंघषतां क्लौवतां ज्ञानमज्ञानं बुद्धिं मोहमेवादीनि चापराणि हन्दादीनीति ।

He is quoted in the Nivandha Saṁgraha, Vyākhyā Kusumāvalī, Vākhyā Madhukoṣa, and the Bower Ms.

KĀŚYAPA IN NIVANDHA SAṂGRAHA.

1. न शिरा-स्नायु-सन्धास्थिमर्मस्त्रपि कथञ्चन ।
दंशंशोत्कर्तनं कार्यं दाहोवा भिषजाऽग्निना ॥
2. अरजस्कां यदा नारीं श्रेष्ठं अरेता ब्रजिहती ।
अन्यसक्ता भवेत् प्रीतिर्ज्यायिते कुम्भिलस्तदेति ॥

KĀŚYAPA IN VĀKHYĀ KUSUMĀVALĪ.

1. नाघीयाति न चाप्यर्थमाहारो न च पच्यते ।
स कोष्ठस्योऽलसोऽसूतकोन सोऽलसकः स्मृतः ।
यदि वाऽलसके दोषाश्चर्त्तुं सारवर्जिताः ।
कारकास्तौत्रयूलादेः स्रोतसः सन्निरोधकाः ।
तिर्यग्गान्तस्तनुं सन्धां दृष्टवत्सम्भयन्ति चेत् ।
स दृष्टालसकस्याज्यः शीघ्रं देहं विघातकृतः ॥
2. विडङ्गव्योषपूतीकवराहिंश्चाग्निभिः पचेत् ।
कार्षिकैः सर्पिषः प्रस्थं द्विचीरं चतुरस्रं च ।
तत्पानाच्छास्त्रकासघ्नं शीघ्रदुर्बलमशुक्लमनुत् ॥

Vṛddha Kāśyapa

3. See 2, Ni. S.
4. दध्नस्यान्वासनं दत्तं न सम्यक् परिपच्यत ।

KĀŚYAPA IN VĀKHYĀ MADHUKOṢA.

I. संयोगजश्च द्विविधं तृतीयं विषमुच्यते ।

गरः स्वादविषस्तत्र सविधं क्वचिन्मतम् ॥

Vṛddha Kāśyapa.

KĀŚYAPA IN BOWER MS., vv. 1010-1040.

1. सुहृन्तु गुडिकामिकां कुमाराय प्रदापयेत् ।
2. अतिसारिषु बालानां गुडिकां दापयेद्विषक् ॥
तण्डुलोदकसंयुक्तां चूड्रेण सङ्ग दापयेत् ।
परुषकरसैर्युक्तां शर्कराचूड्रसंयुताम् ॥
3. कर्ह्यानस्य बालस्य गुडिकां दापयेद्विषक् ।
गुडूचिरसंयुक्तां शर्कराचूड्रसंयुताम् ॥
अथवा पक्कलोदस्य प्रसादेन प्रदापयेत् ।
शर्कराचूड्रसंयुक्तां तथा सम्पादयेत् सुखी ।
4. रक्तातिसारी बालानां गुडिकां दापयेद्विषक् ।
पञ्चवल्ककषायिण तण्डुलानाम् रसेन वा ॥
शर्कराचूड्रसंयुक्तां शशस्य रुधिरिण वा ।
पिण्डेयहरिणाभ्यां वा रक्तेर्मधुमिश्रितैः ॥
5. उदावर्त्तेषु बालानां गुडिकां दापयेद्विषक् ।
गुडोदकेन संयुक्तां विफलाया रसेन वा ॥
6. आमातिसारी बालानां गुडिकां दापयेद्विषक् ।
दधिमण्डेन संयुक्तां तिलिङ्गिकारसेन वा ॥
7. शर्करा चामरी चैव सूत्रयादौ प्रमेहेषु ।
गुडिकां दापयेद्द्वयो मधनाथ प्रसन्नया ॥
आसवेन सृजतिन बालानां दापयेद्विषक् ।
सुखं भवति तेनास्य काण्डपस्य वचो यथा ॥

तेन कोष्ठगतो जन्तुः क्षिप्रमेव प्रसृज्यते ।
 शिरोरोगेषु श्मश्रुं वमनं चैव शाम्यति ॥
 क्रिमिर्गुदगतो यस्य गुडिकाया प्रक्षेपयेत् ।
 तेनास्य सोऽर्धं भवति काशश्चपस्य वधो यथा ॥

8. अविज्ञातेषु रोगेषु गुडिकां दापयेद्विषक् ।
 सुखोदकेन संयुक्तां सर्वरोगविनाशनीम् ॥
 समीत्य कुशलो भेदः कुर्वीत विविधा क्रियाः ।
 बलावलच्च बालानामृतं कालं समीत्य च ॥
 क्रियां पञ्चविधां वेद्यो धात्रीणां सुपपादयेत् ।
 विरेकम् वमनं चैव तथेवाप्यनुवासनं ॥

9. परिकर्षिकां बालानां गुडिकां दापयेद्विषक् ।
 वराहविष्ठा संयुक्तान्तया तच्छुलभावनैः ॥
 शङ्खं रोचोद्विषं पाययौत चिकित्सकः ।
 सुखी भवति तां पीत्वा काशश्चपस्य वधो यथा ॥

10. हिक्काश्वासेषु कासेषु गुडिकां दापयेद्विषक् ।
 मातुलुङ्गेन संयुक्तां गन्धसौवर्धलेन वा ॥

11. जन्तुभिर्वध्यमानस्य गुडिकां दापयेद्विषक् ।
 दाडिमोदकसंयुक्तां मधुना च प्रसन्नया ॥
 यथा शिरोविरेकश्च लिङ्गान्प्रव्यञ्जनानि च ।
 भूयतां भोजनं तेषां यवागुल्लंघुभोजनम् ॥

12. कामलापाण्डुरोगेषु श्रयथूनां तथैव च ।
 युक्तां पिलुकषायैष गुडिकां दापयेद्विषक् ॥

13. रोहिण्यां तालुग्रोथे वा गलगण्डोपजिह्विके ।
 क्षुण्णतां गुडिकां दद्याद्दन्तमांसं च पीडयेत् ॥
 मुखेन दन्ता जायन्ते श्रयथू योपशाम्यति ।
 तेनास्य रोगाः शाम्यन्ते आरोग्यं चाधिगच्छति ॥

14. दद्रुकृष्टकिलासानां पामाश्रय विचर्चिके ।
 त्वग्गतेषु च रोगेषु गुडिकां दापयेद्द्विषक् ।
 कम्पित्वाच चूर्णानि चूर्णानि गुडिकायाथ ।
 पिष्टा सर्षपतैलेन तेनैकमगुलेपयेत् ॥
 गोमूत्रेन सुखोष्णेन खदिरेन रसेन वा ।
 सैष निम्बकषायेण तेन सम्पद्यते सुखौ ॥
15. छाया वा पुतना वापि यथ बाष्पपरिग्रहः ।
 वस्तमूत्रेण संयोज्य गुडिकां तस्य दापयेत् ॥
 अथवा कल्कपिष्टायां गुडिकायां प्रलेपयेत् ।
 तथा सर्व्वयङ्गास्तस्य प्रशामयन्ति सुदारुणाः ॥
16. पार्श्वशूलेषु बालानां गुडिकां दापयेद्द्विषक् ।
 कुलत्वरसभंगुक्तां युक्तां मांसरसेन वा ॥
 धात्र्याः गृहशरीरायाः दोषाः शाम्यन्ति दारुणाः ।
 बालं वर्षथ बालाणां विप्रं समुपजायते ॥
 काश्यपिया गुडिका ॥

The following formulæ are attributed to Kāśyapa :—

1. Dasāṅgamagada :—

वचाहिङ्गुविडङ्गानि सैन्धवं गजपिप्पली ।
 पाठा प्रतिविषा व्योषं काश्यपेन विनिर्मितं ॥
दशाङ्गमगदं पीत्वा सर्व्वकौटविषं जयेत् ॥

2. Traiphala Ghr̥ta.—C.D.—p. 310.

त्रैफलं घृतम्—

त्रिफला दूषणं द्राक्षा मधुकं कटुरोहिणी ।
 प्रपौष्णरीकं मूकोला विडङ्गं नामकेशरम् ॥
 नीलोत्पलं शारिवे द्वे चन्दनं रजनीद्वयम् ।
 कार्ष्णिकैः पयसा तुल्यं त्रिगुणं त्रिफलारसम् ॥

घृतप्रस्थं पथेदितत् सर्व्वमेचरुजापहम् ।
 तिमिरं दोषमास्त्रावं कामलाकाचमर्ज्जुदम् ॥
 वीसर्पं प्रदरं कण्ठं रक्तं श्वयथुमेव च ।
 खालित्वं पलितश्चैव केशानां पतनं तथा ।
 विषमज्वरमर्माणि शुक्रचाय व्यपोहति ॥
 अन्ये च वह्नो रोगा नेत्रजा ये च वर्मजाः ।
 तान् सर्व्वान् नाशयत्याय भास्करस्तिमिरं यथा ।
 न चेवास्मात् परं किञ्चिद्विभिः काश्यपादिभिः ।
 दृष्टिप्रसादनं दृष्टं यथा स्यात् तैफलं घृतम् ॥

Books :—

1. Kāśyapa Tantra : This work is quoted in Nivandha Saṁgraha, vi-xxvii. काश्यपादितन्त्रान्तरोक्ताधिकसंख्या निराकरणार्थं । But there is no Ms. of the book known to scholars.

2. In G.O.M.L., Vol. xxiii, No. 13112, we find a manuscript described as No. 13112. काश्यपीयरोगनिदानम्.

KĀŚYAPĪYAROGANIDĀNAM.

Incomplete.

Gives the varieties and the distinguishing characteristics of different maladies, the method of diagnosing them and also the remedial medicines. The work is attributed to Kāśyapa.

Beginning:

विंशतिश्चे भनिदानम्—

पित्तरक्तं च शीतं च श्लेष्मन्त्रिं च श्लेष्मकम् ।
 श्लेष्मं दुर्गन्धं जिह्वमूलकम् ॥
 कासश्चे भं पार्श्वशीघ्रम् ओढारं श्लेष्मिकं विधा ।
 दोषश्चे भं सान्द्रश्चे भं तनुश्चे भं च पूर्व्वकम् ॥

* * * * *

पितृशे अनिदानम्—

पितृवर्णं श्रेष्ठं पुरुषं.....यन्विरूपकम् ।

हृदयं कष्टयुलं च पितृशे आस्य लक्षणम् ॥

* * * * *

Colophon :

इति विंशतिश्रेष्ठे अनिदानं संपूर्णम् ।

End :

शङ्खद्रावं शिवकाथं सर्वरोगेषु योजयेत् ।

कुटुम्बटादयं चैव क्षीपमात्रेण नश्यति ।

दुष्टप्रणानि गौर्वाणि...मात्रांमिश्रस्यते ।

शुभानिविधानं च (?) अनुपानविशेषणम् ।

सर्वरोगविनिर्मुक्तः काश्यपस्यभिषितम् ॥

Books :

Kāśyapa Samhitā: A work called by this name and apparently ascribed to Kāśyapa is noted in Burnell Catalogue of Tanjore Mss. In Aufrecht's Catalogues Catalogorum, p. 88, the same Ms. is called Kaśyapa Samhitā.

काश्यपसंहिता Kāśyapa Samhitā: Ms.: Burnell Catalogue of Tanjore Mss., No. XLI, p. 70.

Beginning :

केलासशिखरं रम्यं पार्वतीपरमेश्वरी ।

अन्योन्यसुखलीलायां एकान्ते सुखगोष्ठिषु ॥

पार्वती पतिं आलोक्य कृताञ्जलि रभाषत ।

देवेश जगदाधार सर्वभूतमयात्मक ॥

मम प्राणेश नाथाय सर्वलोकजगद्गुरो ।

भूतं भविष्यत् कर्माऽपि त्वयाधीनम् च सर्वेशः ॥

तव प्रसादच्छाद्वार्यम् वेदसारम् श्रुतम् मया ।

कचिद् दिव्यम् ममाऽकाङ्क्षा श्रोतुम् इच्छामि शङ्कर ॥

"Siva then gives an account of diseases and their causes and cure. Sin (pāpa) is the cause, and therefore (as might be supposed) the treatment is much mixed up with religious observances. The diseases are classified very minutely, *e.g.*, 20 kinds of kuṣṭa, 12 of gulma, etc."

SOMA

In the R̥gveda Soma is the juice of a milky climbing plant (*Asclepias acida*) extracted and fermented to form a beverage, liked by the gods and priests. There are many hymns (Ninth maṇḍala) devoted to its manufacture and praise. Gradually Soma was deified as a god, powerful, capable of healing diseases, and bestower of worldly fortunes. Latterly, Soma became a synonym of the moon (latest hymns of R̥gveda; and Atharva Veda), which was hence called Oṣadhī-pati or Lord of herbs; and Soma became the guardian of the healing herbs.

The Soma or moon plant is said to be produced on the Mujavat mountain (Rv. x. 34).

The juice is described as sweet (ix, 62, 21), honied (ix 63, 3, 16), pungent, flavoured and exhilarating (vi. 47, 1, 2). It stimulates voice and calls forth ideas (*ibid*, 3). In viii, 48, 3, it is said to confer immortality. In x. 44, 4, the juice is said to nourish the body.

The plant has been identified as *Acido Asclepias*. Some consider it to be *Semilia Genia*, while others think it to be *Sarcostema Viminalis*. But the Vedic plant is still unknown.

It is said to have been brought by a falcon (i, 80, 2; ii, 43, 7; ix, 48, 3; 62, 4), or by a bird or Suparnā to Indra (viii, 89, 8; ix, 48, 4) from the sky (iv, 26, 6) or from a mountain (i, 93, 6; iii, 48, 2; v, 43, 4; ix, 18, 1; 62, 4; 85, 10; 98, 9) where Varuṇa had placed it (v, 85, 2), or by the daughter of the Sun from the place where the rain-god Parjanya, the father of Soma (ix, 62, 3) nourished it when it was taken by the Gandharvas (ix, 113,

3; S. P. Br., iii, 4, 3, 13; vi, 2, 2-18; ix, 3, 18; Tait. S., vi, 1, 6, 1,5). In the Atharva Veda xix, 6, 16, he is said to have sprung from Puruṣa. A Gandharva is said to be its protector (ix, 83, 4; 85, 12) Vibhāvasu by name, who robbed Gāyatrī when she was carrying Soma from sky for the Devas. (S. P. Br., iii, 2, 4, 1, ff.) From him the gods bought King Soma in exchange of Vach who transformed herself into a female (Ait. Br., i, 27). She was allowed to come back on account of her good songs.¹

The manufacture of the Soma juice is thus described :—

The Soma plants are pressed by the stones and the juice flows through the woolen strainer into the wooden vats, in which it is finally offered as a beverage to the gods on a litter of grass. The stones used in pounding the shoots on a skin "chew him on the hide of a cow." It is purified by ten maidens, *i.e.*, ten fingers.² A more detailed and complete account of the preparation of the Soma juice by fermentation is described in Hillebrandt's *Vedische Mythologie*, Vol. I, according to methods given in the Vedic texts. The Soma-oblations are directed to be made thrice daily: to Agni in the morning, to Indra at mid-day and to the R̥bhus at evening

Properties ascribed to Soma juice :—

"The juice of the plant is said to be an immortal draught (i, 84, 4) which the gods love (ix, 85, 2; 109, 15) to be medicine for a sick man (viii, 61, 17). All the gods drink of it (ix, 109, 15). The god who is its personification is said to clothe whatever is naked, and to heal whatever is sick; through him the blind sees, and the lame walks abroad (viii, 68, 2; x, 25, 11). He is the

¹ Taitt. Br., vi. 1. 6. 5.

² *Ibid.*

guardian of men's bodies, and occupies their every member (viii, 48, 9)."¹

"The exhilarating and invigorating action of Soma led to its being regarded as a divine drink that bestows everlasting life. Hence it is called *amṛita*, the "immortal" draught (allied to the Greek *ambrosia*). Soma is the stimulant which conferred immortality upon the gods. Soma also places his worshipper in the imperishable world where there is eternal light and glory, making him immortal where King Yama dwells. Thus Soma naturally has medicinal power also. It is medicine for a sick man, and the god Soma heals whatever is sick, making the blind to see and the lame to walk." "A comparison of the *Avesta* with the *Rigveda* shows clearly that soma was already an important feature in the mythology cult of the Indo-Iranian age. In both it is described as growing on the mountains, whence it is brought by birds; in both it is king of plants; in both a medicine bestowing long life and removing death. In both the sap was pressed and mixed with milk; in both its mythical home is heaven, whence it comes down to earth; in both the draught has become a mighty god; in both the celestial Soma is distinguished from the terrestrial, the god from the beverage. The similarity goes so far that Soma and Haoma have even some individual epithets in common."² Thus the deification of the intoxicating Soma must have taken place at a date earlier than the composition of the Vedas themselves.

Max Müller says: "Haoma tree might remind us of the tree of life, considering that Haoma, as well as the Indian Soma, was supposed to give immortality to those who drank its juice."³

¹ Muir's Sanskrit Texts, Vol. V, p. 265.

² Macdonell's Sanskrit Literature, pp. 98-100.

Chips from German Workshop Vol. I.

M. Blavatsky remarks : " Plainly speaking Soma is the fruit of the tree of knowledge forbidden by the zealous Elohim to Adam and Eve or Yahir lest man should become as one of us " ¹

Divine powers: He is Asura, or divine (ix, 73, 1 ; 74, 7) and the soul of sacrifice (ix, 2, 10 ; 6, 8). He is immortal (i, 43, 9), confers immortality on gods and men (i, 91, 1, 6. 18 ; viii, 48, 3 ; ix, 106, 8 ; 108, 3 ; 109, 3) and gives felicity in heaven (ix, 113, 7, 8).

Relations to gods: Soma exhilarates Varuna, Mitra, Indra, Viṣṇu, the Maruts, the other gods, Heaven and Earth (ix, 90, 5 ; 97, 42). The Ādityas are strengthened by him and the earth made vast (x, 85, 2). Both gods and men resort to him, as his juice is sweet (viii, 48, 1). He is the friend of Indra (iv, 28, 1, 2 ; ix, 76, 2 ; 85, 3), rides in his chariot (ix, 87, 9 ; 103, 5), and helps him in his conflicts with Vṛtra (ix, 61, 22), whom he is said to have slain (i, 95, 5 ; ix, 24, 6 ; 25, 3, 9 ; 28, 3).

He is Prajāpati, lord of creatures (ix, 5, 9 ; 62, 14), the creator and father of gods (ix, 42, 4 ; 86, 10 ; 87, 12 ; 109, 4), the generator of hymns, of Daus, of Prithivi, of Agni, of Sūrya, of Indra, and of Viṣṇu (ix, 96, 5). He created Sun (vi, 44, 23 ; ix, 61, 16 ; 97, 41 ; 107, 7 ; 110, 3) and so dispelled darkness (i, 91, 22 ; vi, 39, 3 ; ix, 66, 24). He stretched out the atmosphere (i, 91, 22 ; vi 47, 3f), and with the fathers, the sky and the earth (viii, 48, 13), which they sustain and keep apart (vi, 44, 24 ; 47, 5 ; ix, 87, 2 ; 89, 6 ; 109, 6). He produced the two divine worlds (ix, 98, 9). He is king of gods and men (ix, 97, 24), and is elevated over all beings like sun (ix, 54, 3) ; and he holds in his hand all creatures (ix, 89, 6) whom he guards (x, 25, 6). His laws

¹ Secret Doctrine, Vol. II.

are like those of king Varuna (i, 91, 3; ix, 88, 8) and he is prayed to be gracious to those who violate them (viii, 48, 9; x, 25, 3). He is thousand-eyed (ix, 60, 1, 7) and hurls the sinners into abyss (ix, 73, 8). He is formidable, heroic, bountiful and always victorious (ix, 66, 16). He conquers cows, chariots, horses, gold, heaven and water for his votaries. He is a wise ṛṣi (viii, 68, 1), strong, skilful, omniscient, prolific and glorious (i, 91, 2). He is the priest of gods, leader of poets, a ṛṣi among sages, a bull among animals, a falcon among kites, and an axe in the woods¹ (ix, 96, 6). He protects men from enemies (i, 91, 21; x, 25, 7). His votaries neither suffer (i, 91, 8) nor die against his wish (i, 91, 6). He is prayed to prolong lives (viii 48, 7), and not to abandon the worshipper to death (x, 59, 4). His friendship is eagerly desired (ix, 66, 18). He rejoices in the society of waters (x, 36, 5, 6; 36, 8).

His wives: King Soma married the thirty three daughters of Prajāpati; but he was partial to Rohini only. All the sisters went to their father. Soma promised to treat them equally. They came back; but he broke his promise and was seized with consumption (Taitt. Sam., ii, 3, 5) as a punishment. In the Taitt. Br., ii, 3, 10, 1 ff., Śraddhā is said to be his favourite wife. For this, Sitā Savitri complained against him to her father. Prajāpati prepared for her a sweet smelling paste. Sitā was painted with it on her forehead. Soma invited her and gave her the three Vedas which he had in his hand when she asked them as a gift.

In the Purāṇas, he is said to be the son of Atri and Anusūyā; and he is also said to have been produced in the churning of the ocean. But in the R̥gveda, Parjanya, the rain-god, is described as his father and the waters as his

¹ Muir: Sanskrit Texts, Vol. V, pp. 258-270.

sisters (Rv ix, 82, 3; 98, 9; x, 34, 1). He married the twenty seven daughters of Dakṣa, who are really the personifications of the twenty seven lunar asterisms (Yajurveda). Rohini was his favourite, and so Dakṣa cursed him to be childless and consumptive. His wives out of pity, interceded with their father for him; and he modified the curse that the decay should be periodical and not permanent. This story explains the wane and increase of the moon. In the Upaniṣads and Brāhmaṇas, he is said to be drunk up by the gods and so the moon wanes.

He carried off Tārā, the wife of Brhaspati; and so a quarrel arose. Brahmā interposed and compelled Soma to restore Tārā to her husband. Tārā gave birth to a child, whom she truthfully declared to be the son of Soma. The son was called Budha and he was the progenitor of the lunar race.

His vāhana: He has winged mares of his own, a team like Vāyu (ix, 86, 37; 88, 3) in speed. He also harnesses the horses of the Sun (ix, 63, 9).

Arms: He is armed with thousand-pointed shafts, (ix, 83, 5; 86, 40) which he grasps in his hand (ix, 76, 2). His arms are sharp and terrible (ix, 61, 30) and his bow swift-darting (ix, 90, 3), with which he destroys his foes and overthrows cities (ix, 61, 2; 88, 4). He often takes the place of other Vedic gods, Indra, Varuna and other deities. He is said to have killed Vṛtra.

Many European scholars regard that the references to the Moon as Soma are only to be found in the more modern hymns, and in earlier hymns Soma always refers to the plant or its juice. Thus the 85th hymn of the tenth maṇḍala is a later hymn according to Roth (Nirukta, p. 147) and Weber. So are i, 19, 18; v, 18, 19. The examples cited by Yāska in his Nirukta regarding the use of Soma in the sense of the Moon are collected from portions of the Veda, which are distinctly styled as "later." But even

in the hymns which are accepted by scholars as "earlier," Soma refers to a god who lives in heaven:

Gods live in heaven (viii, 13, 2; 69, 3). There Soma lives. His adorable, (ix, 86, 15) feet are in heaven (ix, 79, 14). He was brought to earth from heaven by a falcon (iv, 26, 6). He makes a sign when he comes down (ix, 64, 8). Placed midway between heaven and earth, he goes all round (ix, 70, 5). May his thousand rays come to earth, (ix, 71, 5). He travels in the sky like a bull (ix, 71, 3). Sūrya protects the abode of Soma, who protects the children of Devas (ix, 83, 4). He causes the stars to shine (ix, 85, 9). He is the upholder of, and is shed from, heaven (ix, 76, 1).

The honey-tongued Veṇa milked Soma in heaven (ix, 85, 10). The Veṇas (the Venus or Sukra—see Tilak's Orion, pp. 261-5) pray Soma, the moving child in the sky, (ix, 85, 11). The boy, with Sukra shine through the splendour of the Sun, (i, 86, 4; 94, 1, 2; 96, 24; ix, 46, 4; 85, 12). (Here Soma or the Moon is called a baby as the Moon of second to the fourth day of Suklapakṣa, *i. e.* the fortnight of the moon's increase, can possibly join with Sukra). Soma goes to Devas (ix, 86, 7). Clad in shining clothes Soma crosses the sky (ix, 85, 14). Soma is the fleetest of all moving bodies;—travels like air and Sun (ix, 88, 3), moves alone (ix, 97, 6) towards the East in a car fastened by the Sun's rays, (ix, 11, 1, 3), faster than the speed of the waters, the planets in the sky and the speech (ix, 84, 12), like a fiery horse (ix, 96, 15) on a wide (ix, 12, 8) path curved like a bow (ix, 21, 1; 24, 2, 3) and fixed by law (ix, 86, 33), whence Soma sends his rays (ix, 90, 4).

Soma the Tigmaśṛṅga has two yellow horns like those of the Moon (ix, 5, 2; 15, 4; 70, 7; 87, 7; 97, 7), and increases gradually (ix, 97, 9) in the sky (ix, 97. 40, 44) and thus pleases the gods (ix, 97, 39) by swelling out like

water (ix, 17, 4; 27, 6; 107, 12). Similarly the Sun, Agni and Indra are said to have possessed sharp horus (i, 163, 9; ii, 140, 6; vi, 16, 39; vii, 19, 1; viii, 60, 13). Soma is surrounded (ix, 86, 32) and polished (ix, 76, 4) by the sun's rays. Soma enters into the Sun's rays (= Kalaṣa) (ix, 86, 9; 99, 33), and comes out of it again (ix, 25, 6; 71, 2; 79, 9). Kalaṣa is mentioned in ix, 43, 3; 62, 19; 63, 13, 23). By Kalaṣa, Yāksa understands कलशः the receptacle of Soma. Kalaṣa is also the abode of Mitra Deva (ix, 12, 35; 86, 11; 92, 6; 96, 23). On the Amāvaśyā (the day of the new moon) and Pratipada (the first day of the moon's increase) the moon is not visible and so is represented as entering into Kalaṣa (ix, 71, 9; 97, 33). On the second day the new moon is visible and is thus described as a baby. A place in the sky, near the Sun where the Moon is not visible is the Kalasa of the Moon. See Hillebrandt's *Vedische Mythologie*, I, pp. 463-6 and 467. The fact that the moon shines by the reflected rays of the sun was well known to the Vedic Indians, (ix, 25, 6; 71, 2, 9; 76, 4; 86, 32), *Ibid*, pp. 467-8. See Thibaut: *Astronomie Astrologies und Mathematics*, p. 6.

Soma by his rays causes day (Tithi) (ix, 92, 5), and also measures day (ix, 86, 45). Soma "lights up dark nights and is the day's banner" (vi, 39, 3). The ancient R̥ is used to celebrate pious acts on auspicious days marked by Soma (ix, 6, 11), and thus Soma is said to have helped sacrifices (ix, 97, 12). Through Soma our forefathers knew their ways (ix, 97, 39). Soma makes the nights, days and years resplendent and the Devas fixed him as the cause of days in ancient times (vi, 69, 3). Soma, by prayer, outstrips the enemies; like a reined horse he does good (ix, 96, 15). Soma points out the ways (ix, 70, 9). He kills the impious (ix, 73, 8), he is the king of day (ix, 73, 30). Soma

knows the way (iii, 1, 62, 13; ix, 65, 13; 101, 10; 104, 5, 9; 106, 6; 107, 7). The world is managed by Soma, (ix, 96, 30). He is the king of the world and shows the ways to sacrifices (ix, 96, 10; 4, 66).

In the following hymns Soma is apparently used in the double sense of the Moon and juice of soma plant
ix. 15, 4: He, shaking his horns, does heroic deeds.

5: He hastens with bright golden beams.

6: Passing through the seive, he comes down into the vessels.

7: He is prepared in the pails.

8: Ten fingers and prayers prepare the intoxicating one.

x. 85, 2: Soma in the centre of the stars.

3: He who drinks juice of plant regards it as Soma and so no one drinks the real Soma-juice.

4: Soma hears the sound of crushing stones, but no earthly beings taste thee.

5: When gods drink thee, thou increasest again.

Vāyu is the guardian of Soma.

97, 19, 22: Soma is the king of medicinal plants.

We find that in many hymns as in ix, 37 and ix, 70, the poet refers to the moon and the plant in the same hymns. In the Atharva Veda, Soma often refers to the moon, and in Yajurveda the lunar mansions are said to be his wives. In the post-vedic works Soma regularly means the moon. The two Brāhmaṇas of the Ṛgveda deal largely of Soma sacrifices in which the fermented juice of the Soma plant is used in worshipping the celestial Soma or the moon.

Av., xi, 6, 7. May Soma whom they call moon, free me.

Sp. Br., i, 6, 4, 5	} The king Soma, who is the Moon, is the food of the gods.
xi, 1, 3, 2	
1, 3, 4, 5	
1, 4, 4	

i, 6, 3, 24 : Moon has the nature of Soma.

v. 3, 3, 12 } Soma is the King of Brāhmaṇas.
ix. 4, 3, 16 }

xii, 1, 1, 2 : Soma is the Moon.

Viṣṇu Purāṇa : Bk. 1, Ch. 22 : Brāhmā made Soma to be king of stars and plants.

There are no doubt many hymns that point to the Soma plant but the descriptive terms used may, by analogy, be applied to Moon. "The purifying seive" of 'sheep's tail' may metaphorically refer to the "seive-like wool cloud" (Hopkins). Hillebrandt declares that Soma always means the moon; but his arguments still leave it a matter for discussion whether in the *R̥gveda* the Soma is everywhere addressed to the Moon or the plant. The lunar interpretation of Soma is incompatible with the statements in ix, 97, 41 and *ib*, 37, 4 that Soma "produced the light in the Sun" and "makes the Sun rise." Hopkins rather inclines to identify Soma with Indra and cites many hymns to substantiate his theory. But his arguments are not conclusive;—they depend on a few hymns and cannot explain the others. He thinks that the Soma cult is even older than the Vedic Indra, as several Indo-Iranian epithets of Soma and Haoma such as *Vṛtraghan*, *Verethraja*, etc. refer to a period when the Soma cult was observed, by the Indians and the Persians alike.

Soma is identified with lightning in *Rv.* ix, 47, 3.

But in x, 85, 3 and 4, the lunar theory is expressed in the *Veda* in unmistakable language :

3. "Men think that they drink Soma when the Soma plant is pressed. But the true Soma as known to priests, no one gets as a drink."

4. O Soma! The priests conceal you. You hear the sound of stones but no one in this earth gets you as a drink.

Thus in the hymns to Soma we have the Soma-cult as worship of the moon, but this is concealed by the priests by the more popular worship of the Soma drink from the plant. In modern times we know of similar practices resorted to by the priests: The Panca Makāra, the Five "M"'s Cult has a deep, hidden and esoteric meaning to the priests and at the same time, it forms the basis by the popular cult of revolting Tantric worship, analogous to Dionysiac rites.

Soma is sometimes invoked with other gods: Indra, Agni, Rudra, Vāyu and Puṣān.

Soma and Agni (i, 93, 1 ff): the two gods placed the luminaries in the sky (i, 93, 5)

Soma and Puṣān (ii, 40, 1 ff): Generators of wealth, and of heaven and earth, guardian of the world and centre of immortality.

One lives in sky (4); he produced all the worlds (5) The other lives on the earth and atmosphere (4) and beholds all things (5)

Soma and Indra: iv, 28: vi, 72: Prayer to dispel darkness; to destroy revilers; to bring sun and light; to support sky and to spread out the earth.

vii, 104, 1, 8: Prayer to punish Rākhasas, Yatudhānas, &c.

Soma and Rudra: vi, 74: they are armed with sharp weapons: and prayed for blessings to man and beasts, for healing remedies, and for deliverance from sin.

Atharva Veda: vii, 42,: O Soma and Rudra, drive away the disease that has entered our house-hold.

2: Do ye put all remedies in our bodies.

Soma and Vāyu: v, 52, 11: We pray Vāyu and Soma, the protector of the world.

Soma is supposed to preside over medicinal plants, and is also called Vanaśpati, or "lord of forest." In the R̥gveda 1.22 we find the sage Medhātithi declaring his knowledge of the power of water as a remedial agent, as derived from Soma.

"Soma has declared to me 'all medicaments as well as Agni, the benefactor of the universe, are in the waters'—the waters contain all healing herbs.

"Water bring to perfection all disease,—dispelling medicaments for (the good of) my body, that I may long behold the sun.

"Waters take away whatever sin has been (found) in me, whether I have (knowingly) done wrong or have pronounced imprecations (against holy men), or (have spoken) untruth.

"I have this day entered into the waters: we have mingled with their essence."

Wilson's Trans. Vol. I, p. 57.

In another hymn i. 91 :

"Thou, Soma, fond of praise, the lord of plants, art life to us." *Ibid.* p. 234.

And again i. 120 :

"Be unto us, Soma, bestower of wealth, the remover of disease, exulting Soma! increase with all twining plants."

Ibid. p. 324.

In the R̥gveda the following hymns treat of the Soma :

In most of the hymns to Indra, Soma is described as the friend of Indra. All the gods depend on Soma for immortality, and Soma juice is praised in the hymns addressed to other gods. So Soma is mentioned in many hymns of the different maṇḍalas.

- Rv. I, 91, 1—23 : Originator and protector of plants.
 93, 1—12 : Prayer to Agni and Soma.
- II, 30, 6 : Prayer to Indra and Soma.
 40, : Prayer to Soma and Puṣā.
- III, 62, 13 : Soma knows the way.
 14 : May Soma bring boiled rice free from
 disease germ for the biped and
 quadruped animals.
 15 : May Soma sit in the sacrificial altars
 after prolonging our life and con-
 quering our enemies.
- IV, 28. : Prayer to Indra and Soma.
- V, 51, 12 : Prayer to Vāyu and Soma who is the
 protector of the world.
- VI, 47, 1-5 : Somastimulates speech, causes pleasure,
 displays solar splendour and upholds
 the sky.
 51, 14 : Prayer to kill Paṇi.
 52, 3 : Prayer to hurl weapon against the
 enemies.
 72. : Prayer to Indra and Soma.
 74. : Prayer to Rudra and Soma to cure
 contagious diseases.
 75, 18 : May Soma protect you with Amṛta.
- VII, 35, 7 : May Soma be peaceful to us.
 41, 1 : Pray Soma and Rudra in the morning.
 104, 1-7 : Prayer to Indra and Soma.
 25 : Sweet adorable Soma.
- VIII, 48, 3 : O Amṛta Soma! we will drink you
 and become immortal.
 4 : Prayer to prolong our life.

5: Prayer for protection from loss of character and diseases.

7: Prayer to prolong life.

9: Soma is the protector of our body.

10: Prayer to Soma to prevent indigestion.
May Soma remain in our stomach forever.

11: May the incurable diseases disappear.
These diseases becoming severe make us tremble. Soma when drunk prolongs life.

12: Soma when drunk enters into our heart.

72-17: Soma is the medicine for the sick.

79-1 : Soma is the conqueror of the world, is a plant and a R̥ṣi.

2: He clothes what is naked and cures the sick; the blind sees and the lame walks.

IX: The whole of the ninth maṇḍala teems with descriptions of the preparations of the plant Soma. The apparatus used in the manufacture of Soma juice: filters, vessels, furnace etc., are mentioned; and this maṇḍala contains perhaps the earliest account of a pharmaceutical preparation—the Soma juice.

X, 17, 11-14: Prayer to Soma juice.

25, 11: Rescues the blind and the lame from their defects.

36, 4: May the Stones drive away the demons.

- 8 : Soma juice mixes with water.
- 44, 4 : Soma juice nourishes the body.
- 76, : Prayer to the stones which crush the
Soma plant.
- X. 85, 1 : Soma is in the sky.
- 2 : Soma has made this earth spacious ;
Soma is placed near the stars.
- 3 : Men think that they drink Soma juice
by pressing the Soma plant. But
the true Soma, as known to the
poets, no one can drink.
- 4 : The poets have concealed Soma. You
hear the sounds of stone but no
one on the earth can drink Soma.
- 5 : When Soma is drunk, it increases
instead of loss. Vāyu protects
Soma, as year is sustained by
months.
- 19 : Candra distributes long life.
- 94, 1, 14 : Description of the preparation of Soma
juice.
94. } Prayer to the stones for pressing
175. } Soma.

Formulae attributed to Chandra :—

1. Candraprabhāgutikā : It was obtained by Candra through Sambhu's kindness—R.C. ix, p. 86. This formula has been quoted in pages 58-9.

BUDHA.

The "Wise, or intelligent." He is the planet Mercury, son of Soma, the moon, by Rohini, or by Tara. the wife of Vṛhaspati, the Lord of prayer. He married Ilā, the daughter of the Manu Vaivasvata, and by her had a son, Pururavās, a god among men, who loved Urvaśī, that paragon of the Apsārasas (Harivaṁśa 88-11). Budha was the author of a hymn in the Ṛgveda. For an account of his birth see Soma.

Books :

1. Sarvasāra : Budha, the son of Candra (Moon), is said in the Bramhavaivarta Purāṇa, to have written a work on medicine called the "Epitome of all sciences." ¹
- 2. He is said to have been well-versed in science and is said to be the first author on veterinary science and to have written a scientific treatise on elephants.

End of Vol. I.



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