HISTORY OF INDIAN MEDICINE
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

by

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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 University. Published by the Calcutta University


5. Glossary of Indigenous Medicinal Plants.


8. Lathyrisn or the Khesaridal 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
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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 Ayurvedic 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.
| भ   | a | छो   | o | ट   | t | ब   | b |
| भा  | ā | छी   | au| ठ   | th| भ   | bh |
| र   | i | क   | k | ड   | d | म   | m |
| ठ   | i | ख   | kh| ठ   | dh| य   | y |
| ड   | u | ग   | g | ण   | n | र   | r |
| घ   | ā | घ   | gh| त   | t | ल   | l |
| ङ   | r | ठ   | n | थ   | th| व   | u |
| ङ   | r | च   | c | द   | d | श   | s |
| छ   | l | छ   | ch| ध   | dh| घ   | s |
| ञ   | l | ज   | j | न   | n | स   | s |
| ध   | e | ह   | jh| प   | p | ह   | h |
| ऐ   | ai| ज   | ni| फ   | ph| छ   | l |

* (Anuvāra) . . . m | s (Avagraha) . . . ' |
* (Anunāsika) . . . n | (Udāta) . . . . . . 2 |
: (Visarga) . . . h | Svarita . . . . . 2 |
× (Jihvāmulīya) . h | Amuddāta . . . . . 2 |
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INTRODUCTION

Weber, in his History of Indian Literature, 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: "The number of Sanskrit medical works, and especially of small compilations on the treatment of diseases, is too numerous and

1 Pp. 269-70.
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. Wilson\(^2\) wrote on the early medical authors. Royle\(^3\) proved the originality of the Hindu medicine. His arguments for antiquity of Hindu Medicine are deservedly styled as epoch-making researches. Dietz

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\(^2\) Oriental Magazine, Calcutta, February and March, 1823.

\(^3\) Royle: An Essay on the Antiquity of Hindoo Medicine, 1837.
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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 Commentary¹ we find a list of the Hindu writers on medicine and their works. In Weber’s History of Indoan Literature, we have a few pages on the medical texts of the Hindus. Cordier’s Recentes 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 Dictionary³ 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 Samhītā,” 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 Vanausadhi Darpaṇa, Kavirāja Virājācaraṇa Gupta, gives us an elaborate list of Ayurvedic 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

Civilisation in Ancient India, Vol. II, Ch. IX.
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." Later on he complaints: "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." Even now, after an interval of a century, similar remarks are made by learned men. Willoughby 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

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. Whitney\(^1\) 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.
eighty 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 textbooks, 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 Rgveda 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 lacunae 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," Genéva, 1696, 8vo. Amast, 1728, 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:—Haesser: Lehrbuch der Geschichte der medicin und der epidemischen Krankheiten. Jena, 3rd ed. 1875-79.—Daremberg: Histoire des Sciences


"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:


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

Villaiba: Epidemiologia Española.

Ilmoni: Bidrag till Nordens Sjukdoms Historia.

On the Pathological side, we have:


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

Atlas Historique et Bibliographique de la Medicine composé de Tableux sur l'Histoire d'Anatomie, de Physiologie, de l'Hygiène, de la Medicine, de la Chirurgie et de l'Obstetricque, etc., Paris, 1829.

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


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

Hirschel: Geschichte der Medicin. Wien, 1862.


Plouquet: Literatura Medica Digesta: It is a storehouse of references on medical subjects.


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


But this spirit of historical research gradually declined even in the continent of Europe. "In France, Daremberg, 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
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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 Medicineschen Bibliographe for 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

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-Hippocratic treatises which were not published before, as well as treatises of Kratenas, Galen and Promotus.
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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:


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


Herschberg: Aegypton, Geschichtliche studien eines Augenarztes, Leipzig, 1890.


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.

Stephenson, Sydney: Epidemic Ophthalmia, 1895.
Hanser: Le cholera en Europe depuis son origine jusqu'à 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.

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 Mackenzie (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

³ Fitz-Patrick Lectures, 1903, p. 4.
In the Editor's Preface to the first edition of Vol. I of Paulus Ægineta, 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. Bartlot 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.
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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:


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

Kuhn: Medicorum Græcorum Opera quæ extant. Lipsiae, 1821—30. This work includes the works of Hippocrates, Aretæus, Dioscorides 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.

Biographio universalle.

Aikin: The Life of Caius.
Burton: The Life and Writings of Boerhaave, 2 vols. Lond., 1743.
Johnson: Life of Boerhaave, Lond., 1834.
Baron: Life of Jenner, 1827.
Guthrie: The Medical History of J. Evelyn and his Time (1620-1706), 1905.
Life of Richard Owen: Written by his grandson and published by John Murray.
Life and Works of John Arbuthnot: By Geo. A. Aitken, Clarendon Press, 1892.
Aveling: Biographical Sketches of British Obstetricians.
In the Oxford Editions,—Edited by Dr. Greenhill Life of Sir James Stonhouse, Bart., M.D.
Anecdota Sydenhamiana.
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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.


For Greek and Roman Physicians, the reader is referred to the articles in Smith’s (larger) Classical Dictionary on “Hippocrates,” “Galen,” “Celsius” 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;—Quincke: Medicina Statica; being the Aphorisms of Sanctorius, 1728.


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 Linacre, the founder of the Royal College of Physicians of London.
Russell: The History and Heroes of the Art of Medicine, London, 1861.


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 Alburt's System, History of Medicine by Alburt, and Medicine in Modern Europe by Payne;—in Osler's System, the Evolution of Internal Medicine by Osler;—in Encyclopaedia Medica, Vol. 7, History of Medicine by Willoughby;—in Encyclopaedia of Practical Medicine, History of Medicine by Alison;—in Encyclopaedia Britannica, Historical Notice of Surgery by Charles Creighton;—in Chambers' Encyclopaedia, History of Medicine by Pettigrew; all these articles have brought up the subject to the level of our existing knowledge.


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

Elliot: Outlines of Greek and Roman Medicine. 1914.


Netter: History of Ancient Pharmacy.

Garrison: History of Medicine. 1913.

Beckman: History of Discoveries and Inventions, Art, Infirmaries 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 Medicale. 1889.

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

Wilder: History of Medicine.

Remondino: History of Circumcision. 1891.


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.


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


Bellamy: History of Surgical Anaesthesia, 1896.


Griffiths: Early Welsh Medicine, 1888.

Jones and Withington: Malaria and Greek History, 1909.


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.

Dunglison: 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.


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.


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

Bedroe: The Origin and Growth of the Healing Art.

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


Newman: Archaeologica Medica.


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
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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'Acrey 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 mediaeval 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.”


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


¹ 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.


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.


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.


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:


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

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


Anatomical and Medical Knowledge of Ancient Egypt (abstract). Royal Institution of Great Britain, March 5th, 1886.
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Hieroglyphics and Alphabet in Chambers' Cyclopædia, 1890.
Comrie: Medicine among the Assyrians and Egyptians in 1500 B.C.
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

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.

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."

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

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thought may be found in those intellectual tombs lining the walls of libraries, which may haply under favourable influences be quickened into new fruitfulness," 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 Samhita 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, Udoychand 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, Hærnle, 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, Homoeopaths, Hakims, and Kavirajes 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 1888; 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 (1844-17) and into German, by Vellürs. It has been translated into the modern languages of India;

¹ The Hon. Justice Sir Asutosh Mookhopadhyaya, 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 Samhitā 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 Samhitā.” 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 Sāṁhitā, of which there is only a single manuscript i.e. 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 Agnivesā, Bhela and others. The treatise is thus older than the celebrated Cāraka Sāṁhitā 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 Rogaśirvāpana 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

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. Maenamara 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 Suśruta Saṁhitā that knowledge of many allied branches of science is highly useful to a student of medicine. Suśruta says¹: "Any one who

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Suśruta 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 Collège 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 Linnaeus 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
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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 Howel’s Work.
the more we are convinced that no one system, however plausible, would explain the whole of them.”

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.” 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.**

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,

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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 Sertunér adopted the term “Morphinum” from “Morpheus,” the son of the god of sleep (Somnum), that Achelia Mitford plant was discovered by Achilles, that the use of Acetum Scillæ 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, Menacrites invented the diachylan powder, Avicenna invented the method of silvering and gilding pills, Øribasius 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 Pharmacopoeia 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 attar 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.

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

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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!

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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.”

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 chancerous, 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 Cappodocia (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

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.  

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

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 Alburt'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 anaesthetic 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 anaesthetics 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 mecha-
nical training. The training in medicine is a liberal educa-
tion. 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 Linnæus, 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 Shrdy
found joy in painting pictures. Canon Arnot, like St. Luke,
entered the ministry. Dr. W. T. Grenfell became cele-
brated 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
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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 todten 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

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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 or 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

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1 Sir Felix Semon: Relations of Laryngology, Rhinology, and Otology with other Arts and Science, B.M.J., Vol. 17, 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.  

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 scold 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

felicitate ourselves that we of the twentieth century are blessed with more receptive minds. "Tempora mutantur non nos mutantur." 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.
'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 cyclopian—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.'

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 remark: "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 pursued, 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."

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1 Adams' Hippocr., p. 232.
"The merely scientific physician," says Dr. Clifford Albutt (a celebrated English authority on Medicine), "is apt to be blind to useful manoeuvres 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 slokas 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

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\(^{1}\) कृत्यमायुक्तः: शास्त्री मिष्टिक्षेत्रादिवात्रो मुनावर्तिक्षेत्रभस्मादा-बन्धमायुक्तः।

Caraka Saṁhitā, I. xxx.
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.
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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 Polydius who cured Glauceus, 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 recovers its powers of effectually resisting serpents by eating the plant which is known as cunile 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 wall pellitory, or helcine; ducks, geese, and other aquatic birds of a similar nature, with the butrush. The raven, when it has killed a chameleon, a contest in which even the conqueror suffers, counteracts the poison by means of laurel."  

1 Pliny: Quoted in Curious Creatures in Zoology. By Ashton. Art.—Animal Medicine, p. 180,
In the Vedas, the medical knowledge is often said to be derived from the actions of animals. In the Atharvaveda, 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, 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:

विषक्षण्यागरीयागरी विषक्षण्यागरीयागरी विषक्षण्यागरीयागरी

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

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

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 aforesmne. 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 remarks: “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-dvāra.—The Āyurvedic system of medicine which consists of eight divisions, has a section on Vājīkaraṇa. 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.
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in the Vedic times, for in the Rv. (i. 116. 13; 117, 24; vi. 62. 7; x. 39. 7; 65. 12) Vadhrimati (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, Hiranyakahasta. 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 kapikacchu (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 Asclipiads 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 Kāśi. It is from this similarity of names of their birth-places, and from striking resemblances of the Ayurveda and the Greek Medicine, Haas propounded the theory that Dhanvantari was an adaptation of Hippocrates, and Kāśi 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."  

"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,

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.”

“The histories of the cases were recorded,” says Russel, 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

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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

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.'

Neuberger\(^2\) 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.
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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 Boeotia, and particularly the ancient dream-oracle of the earth-god Amphiaraoes 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 (Σωτήρ, Ἡλείος, Πατρίς), 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 Ευχουμένης, 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 Asclepius 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) Asclepius 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 Asclepius 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 medicine 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."

In India, we still find similar temples at Kalighat, Tarakesvar, Baidyanath, 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 Kali, 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, Kien, and others. Professor Ling was a

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

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

Clinical Excerpts XVI, No. 5, p. 105.
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."

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 Ayurvedic 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

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
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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 Bondwel*la (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, Sountonin, 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 Pharmacopoeia 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.'

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.'

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

2 Waring: Pharmacopoeia of India, 1868, pp. ix-x.
INTRODUCTION

I have collected from various sources the following:

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

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Linseed Poultice</td>
<td>Nuteeya, or Neem-leaf Poultice.</td>
</tr>
<tr>
<td>Linseed Meal Poultice</td>
<td>Rice Flour Poultice.</td>
</tr>
<tr>
<td>Conium Poultice</td>
<td>Dhatura Poultice.</td>
</tr>
<tr>
<td>Mustard Poultice</td>
<td>Get Kachoo, or Lal Chittra Poultice.</td>
</tr>
<tr>
<td>Yeast Poultice</td>
<td>Toddy Poultice.</td>
</tr>
<tr>
<td>Cerate of Cantharides</td>
<td>Cerate of Telini Flies.</td>
</tr>
<tr>
<td>Decoction of Iceland Moss</td>
<td>Decoction of Gulancha, Ceylon Moss.</td>
</tr>
<tr>
<td>Compound Decoction of Barley</td>
<td>Decoction of Oryzae or Isphaghol.</td>
</tr>
<tr>
<td>Decoction of Oak-bark</td>
<td>Decoction of Rohunu, Acacia Arabica, Pomegranate Bark.</td>
</tr>
<tr>
<td>Plaster of Cantharides</td>
<td>Plaster of Telini Flies, Plumbago Rosca.</td>
</tr>
<tr>
<td>Extract of Bark</td>
<td>Extract of Barberry Bark.</td>
</tr>
<tr>
<td>Extract of Gentian</td>
<td>Extract of Chiretta, Justicia or Kreat, Gulancha or Palo, Kurroo.</td>
</tr>
<tr>
<td>Extract of Liquorice</td>
<td>Extract of Abri or Goonch.</td>
</tr>
<tr>
<td>Extract of Logwood</td>
<td>Extract Dyospyri or Gab, Japan wood, Nemooka, Sappan wood.</td>
</tr>
<tr>
<td>Extract of Jalap</td>
<td>Extract of Kaladan.</td>
</tr>
<tr>
<td>Extract of Poppy</td>
<td>Extract of Hemp.</td>
</tr>
<tr>
<td>Infusion of Guaparia</td>
<td>Compound Infusion of Sohonjuana.</td>
</tr>
<tr>
<td>Infusion of Gentian</td>
<td>Infusion of Bel, Chiretta, Gulancha. Kreat, Kurroo, Pata, Ununtamool,</td>
</tr>
<tr>
<td>Infusion of Ipecacuana</td>
<td>Infusion of Banopsha, Chini, Kanoor.</td>
</tr>
<tr>
<td>Compound Infusion of Linseed</td>
<td>Infusion of Pedalium, or Gokeroo.</td>
</tr>
<tr>
<td>Infusion of Serpantactory</td>
<td>Infusion of Ajapana.</td>
</tr>
<tr>
<td>Compound Gamboge Pill</td>
<td>Pilula Kaladanana.</td>
</tr>
<tr>
<td>Ipecacuanha Powder</td>
<td>Compound Powder of Mudar.</td>
</tr>
<tr>
<td>Syrup of Sarsaparilla</td>
<td>Syrup of Ununtamool or Chobchinee.</td>
</tr>
<tr>
<td>Tincture of Catechu</td>
<td>Tincture of Myrobolan.</td>
</tr>
<tr>
<td>Compound Tincture of Bark</td>
<td>Tincture of Barberry, Todallia.</td>
</tr>
<tr>
<td>Tincture of Coleochum</td>
<td>Tincture of Hermodactyl or Soorinjan tulk.</td>
</tr>
<tr>
<td>Tincture of Cubehs</td>
<td>Compound Tincture of Gurjun.</td>
</tr>
<tr>
<td>Tincture of Gentian</td>
<td>Compound Tincture of Chiretta.</td>
</tr>
<tr>
<td>Tincture of Jalap</td>
<td>Tincture of Kaladana.</td>
</tr>
<tr>
<td>Tincture of Hop</td>
<td>Tincture of Mishme Teeta, Gulancha.</td>
</tr>
<tr>
<td>Tincture of Myrrh</td>
<td>Tincture of Murgola.</td>
</tr>
<tr>
<td>Tincture of Opium</td>
<td>Tincture of Hemp, Dhatura.</td>
</tr>
<tr>
<td>Ointment of Elemi</td>
<td>Ointment of Gunda Biraza.</td>
</tr>
<tr>
<td>Ointment of Nitrate of Mercury</td>
<td>Ointment of Chakoor, Chalmoogra, Compound Cimabbar, Daod mur-</td>
</tr>
<tr>
<td>Calamine Cerate</td>
<td>dun, Sal Ammoniac and Borax.</td>
</tr>
<tr>
<td>Resin Plaster</td>
<td>Compound Ointment of Myrobolan.</td>
</tr>
<tr>
<td>Fresh Lemon Peel</td>
<td>Plaster of Gum Kahrubah.</td>
</tr>
<tr>
<td></td>
<td>Dried Lemon Peel (in preparation of Compound Infusion of Orange</td>
</tr>
<tr>
<td></td>
<td>Peel, Compound Infusion of Gentian, Syrup of Lemon and Tincture</td>
</tr>
<tr>
<td></td>
<td>of Lemon.)</td>
</tr>
<tr>
<td>Pharmacopoeial Medicine</td>
<td>Substitutes: — Country Medicine</td>
</tr>
<tr>
<td>-------------------------</td>
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</tr>
<tr>
<td>Lard</td>
<td>Hard Soap, Prepared Suet, Resin, or Yellow Beeswax (in preparation of the plasters).</td>
</tr>
<tr>
<td>Bitter Orange Peel</td>
<td>Indian Orange Peel.</td>
</tr>
<tr>
<td>Olive Oil</td>
<td>Arachis Oil or Sesame Oil in preparation of Hard Soap, Liniments, Ointments, and Plasters.</td>
</tr>
<tr>
<td>Benzoated Lard Oil of Theobroma</td>
<td>Benzoated Suet.</td>
</tr>
<tr>
<td>Mylabris Phalerata (Beetle)</td>
<td>White Beeswax (in preparation of Suppositoria), Kokum Butter, for Unguents.</td>
</tr>
<tr>
<td>Mucilage of Gum Acacia</td>
<td>Telini fly and other Species of Mylabris in preparation of Blistering Liquid of Mylabris, Warming Plaster, Mylabris Plaster and Vinegar.</td>
</tr>
<tr>
<td>Gum Acacia, Gum Arabic</td>
<td>Mucilage of Indian Gum.</td>
</tr>
<tr>
<td>Catechu</td>
<td>Indian Gum, Gum of Wood-Apple Tree.</td>
</tr>
<tr>
<td>Kino Gum</td>
<td>Black Catechu, Gab.</td>
</tr>
<tr>
<td>Calumba</td>
<td>Aotea Gum (Palas).</td>
</tr>
<tr>
<td>Podophyllum Peltatum</td>
<td>Gulancha, Mara Manzil (Tamil), Coscinum Fenestratum, Trichosanthes Cordata.</td>
</tr>
<tr>
<td>Horse radish</td>
<td>Indian Podophyllum.</td>
</tr>
<tr>
<td>Male Fern</td>
<td>Root of Morniga Pterygosperma, Sohnjuna.</td>
</tr>
<tr>
<td>Officinal Sassafras</td>
<td>Pomegranate Root-bark, Kamala.</td>
</tr>
<tr>
<td>Barbadoes Aloes</td>
<td>Nepal Sassafras.</td>
</tr>
<tr>
<td>Socotrine Aloes</td>
<td>Indian Aloes.</td>
</tr>
<tr>
<td>Siam Gamboge</td>
<td>Barbadoes Aloes.</td>
</tr>
<tr>
<td>Spermaceti Ointment</td>
<td>Indian Gamboge.</td>
</tr>
<tr>
<td>Copaiba</td>
<td>Kokum Butter.</td>
</tr>
<tr>
<td>Pine Resins</td>
<td>Balsam Gurjun, Liquid Stornx, Sandal Oil.</td>
</tr>
<tr>
<td>Sulphate of Quinine</td>
<td>Dammar.</td>
</tr>
<tr>
<td>Quinine</td>
<td>Karanjwa Powder.</td>
</tr>
<tr>
<td>Ruta Graveolens</td>
<td>Bark of Baobab, Sulphate of Beberia.</td>
</tr>
<tr>
<td>Jamaica Quassia</td>
<td>Ruta Angustifolia.</td>
</tr>
<tr>
<td>Almond Oil</td>
<td>Bharangi, Kariyat.</td>
</tr>
<tr>
<td></td>
<td>Oil of Java almonds (in Mistura Amygdala), or Country almonds.</td>
</tr>
<tr>
<td>Myrrh</td>
<td>Gugul.</td>
</tr>
<tr>
<td>Burgundy Pitch</td>
<td>Black Dammar.</td>
</tr>
<tr>
<td>Cinchona</td>
<td>Bark of Cedrela Toona (Roxb.) Barberry, Atis, Nim Bark, Alstonia Bark, Rohun Bark.</td>
</tr>
<tr>
<td>Extract Colocynth</td>
<td>Extract Cassia Leaves, Indrayan.</td>
</tr>
<tr>
<td>Galls</td>
<td>Myrobolans (in lotions, injections, etc.) Kakra-Singili.</td>
</tr>
<tr>
<td>Common Fennel</td>
<td>Panmuhuri.</td>
</tr>
<tr>
<td>Ipecacuana</td>
<td>Mudar, Kurchi, Tylophora Astmatica (in Dysentery) Crinum Juice (Emetic and diaphoretic).</td>
</tr>
<tr>
<td>Compound Powder of Jalap</td>
<td>Compound Powder of Kaladana.</td>
</tr>
<tr>
<td>Datura Stramonium, Belladonna</td>
<td>Dhatura Abba,</td>
</tr>
</tbody>
</table>
INTRODUCTION

Pharmacopoeial Medicine.

Sarsaparilla, Dulcamara...
Gutta-percha tissue...
Officinal 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...
Traganth...
Senega...
Aconite...
Ergot...
Alexandrian Senna...
Elaterium...
Turkey Rhubarb...
Lemon Juice...
Oil of Nutmeg...
Mezereon Bark...
Wine, Brandy, Proof and Rectified Spirit.

Cascarilla Bark...
Wooden Splints...
Lard...

Substitutes:—Country Medicine.

Fresh Hemididmus root.
Young plantain leaf.
Scilla Indica, Crinum root.
Cocoanut Oil, Shark-liver Oil.
Betel Nut Catechu.
Arrack from Palmyra or Cocoanut Palms.
Aristolochia Indica Root.
Lemon Grass Oil.
Ajwain or Omum.
Patna Opium.
Valeriana Hardwicki, Nardostachys Jatamansi.
Sowa.
Cloves.
Long Pepper.
Kutira Gum.
Makhtjuri (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 petiolas, Bamboo.
Shr. 'k-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 ofaconite 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 Belladona, the Deadly Night-shade, for example, is a common weed on the Himalaya 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."

**ARTICLES OFFICINAL IN THE PHARMACOPEIA OF INDIA NOT CONTAINED IN THE BRITISH PHARMACOPEIA.**

Coptis Teeta, Wall. Root. Mishmi Tita.
Tinospora cordifolia, Miers. Root and stems. Gulanea.
Narcotine.
Garcinia pictoria, Roxb. Gum-resin. Indian Gamboge Tree.
Hibiscus esculentus, Linn. Capsules. Okra.

2 Pharmacopoeia of India, 1868, pp. xv-xvi.
Mucuna pruriens, D.C. Legumes. Cowhage.
Acacia Catcechu, Willd. Extract of the wood. Khadir.
Butea frondosa, Roxb. Inspissated juice. Palas.
Abras precatorius, Linn. Root. Goonch.
Arachis hypogaea, Linn. Oil of seeds. Ground nut.
Hydrocotyle Asiatica, Linn. Leaves. Penny-wort.
Punica granatum, Linn. Rind of fruit. Pomegranate.
Calotropis gigantea, R. Br.; and C. procera, P. Br. Root-
bark. Mudar.
Tylophora asthmatica, W. et A. Leaves. Antamul.
Datura alba, Linn. Leaves and seeds. Sādā Dhutura.
Andropogon citratum, D.C.; A. Nardus, Linn.; and A.
pachnodes, Trin. Volatile oil. Gandha bena. Kamā-
khér.
Gracilaria lichenoides, Greville, and other species. Dried
plant. Ceylon Moss.
Squalus Careharias, Linn. Oil obtained from the liver of
the White Shark.

V. Identification of Diseases: A study of Indian Medi-
cine may lead to a better identification and descrip-
tion of such diseases as are unknown or uncommon in
Europe.
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 Baidis 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 Caliphis; 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 prosecuted 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,

INTRODUCTION

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 Ayurvedic 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.

Sandes\(^1\) of Robben Island is satisfied that chaul-moogra 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 Hydnescarpate (Sodium Gynescardate 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 1667, 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 χολερη. The Arabic physicians applied the term Haïza to cholera, and this word is in common use in India at the present day.

Fayrer\(^2\) says: "There is abundant evidence to show that the disease has been well known and described since

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1 Journal of Tropical Medicine and Hygiene, March 1, 1912.
2 Natural History and Epidemiology 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 Čaraka 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—Subrutsa 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—Sāchikā
meaning a needle. Men versed in the Śāstras, learned people, and moderate eaters seldom suffer from Viśāchikā. Greedy people, and those who have no control over their desires, get this disease. In Viśāchikā 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 Viśāchikā 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 (Viśāchikā).

"In Viśāchikā, 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 Viśāchikā do not exactly coincide with the symptoms of Cholera. Dr. Macnamara in his treatise on Asiatic Cholera quoted certain passages from Suṣruta 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 Suṣruta:—"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,
INTRODUCTION

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 Visōchikā 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 Kavirājan, a distinguished medical authority of Bengal, is of opinion that Visōchikā 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 Suśruta medical works, in support of his views on the subject:—Ed.

विसोचिका ।

ते दिविधसाम-दीविधसाचते भिषजी विसोचिकामलुकः।
तत विसोचिकामुक्ताभ्यो भ्रात्सर्वदीर्घं यथीत्तथपरं विद्यात्॥
तथ वात: युक्तायामस्रूयुक्तशेषमेव विोचिकाः।
शमान्तवैशाय प्रगाहकांशुष्ठप्रमानानि करोति॥
पितं पुन: वर्तन्तिसरं ज्ञानविवेकसमस्यप्रमानानि।
श्रीता तु च छृद्यरोचका विपाकशितज्ञारलसापाकागीरजापि।

( चरक विमान-स्थानि र्याधाय: )
Hirsch says: “The oft-quoted passage from the Ayurveda of Suśruta, 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, often of badly prepared or decomposing food, following periods of religious fasts, predispose the nation of India to Cholera.”

Stitt.
Prodromal or premonitory diarrhoea.

First stage or the stage of evacuation:

Vomiting: first stomach contents, then rice-water.

Purging: profuse and frequent.

Stool: faecal first, then rice-water stool.

Cramps and stabbing pain: especially of calf-muscles and those of feet; abdominal muscles less so.

Thirst: unquenchable.

Prostration: sudden loss of शक्ति (B, M); आन्तरिक (C).

Gastrodynia. ... ... दर्द (C).

Second stage: The stage of तन्द्रा (C); शरीरक तंद्रा (C).

Purging: frequent; rice-water stool.

Vomiting ... ... वमन (B).

Thirst: urgent ... विघ्न (B.C.)

Nausea ... ... दुग्धशोक (C.D), चपलता चंभनिव (B).

Cramps ... ... दमनी (C).

Failure of strength, complete लसितुद्दे.

Animal heat: Superficial जल्दी (B); शीतल (C).

Rectal temp. elevated; जल्दी (C).

sense of heat. Hyperthermic type fatal.

Circulation: ... ... दांत (M).

Heart ... ... हड्डयंत्र (B).

Pulse: imperceptible ... ‘धराधूलित (C).

Excretions:

Urine: anuria ... शून्य (B); चांदन (C).

Bile

Voice: Vo. Cholera: ... वाक्ष्य (V); वाक्ष्य (V).

husky, whispering.

Excessive restlessness then शक्ति (B).

apathy.

Gastric fluid (C); प्रातुत (V).

Perspiration: profuse; cold चम्मे, चेद एक clammy skin.

The symptom called “antardāh” अन्तर्याह literally, means internal burning. In this stage the general appearance of the patient is bluish and his respiration labored.

शिवृत जल्दी यथा सततं महाशान: ।

भूलभूत दशकाला काराणांतर्याहित: कारान: ॥
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Countenance: peculiar expression; cadaveric appearance: cyanosed, drawn, pinched face.

Eyes: sunk ... चन्दनप्रविंदा (B).
Complexion: blue ... देवधार्य (B).
Shrivelling of the skin of extremities: washerwomen’s hands.

Doughiness of the skin of the abdomen: कुड़ियाग्रत (S); अधाल (D).

Dulness of perception ... अच्छान.
Common sensibility: dull ... चन्द (B, C); शूष्क (C).
Appetite: anorexia ... अपिकरक्षण (C); शराचक (C).
Vision ... impaired, विसंगता (B).

Hearing ...

Smell
Taste ... चरोचक (C).
Motion ... चालस (C).

Integrity of consciousness:

The Intellect : विसंगता (B); चन्द (B, C); शनता, प्रलाप (C); प्रलय (V)

The Will ... सद (C)

The Emotion

Headache ... शिर:शूल (B); शिरोग (S.D); शिरस: शेब: (S).

Sleeplessness ... अनिटा (B).

The third stage or the stage of reaction:

Cholera typhoid:

Surface warmer.
Pulse: distinct.
Urine: secreted.

Temperature: febrile. ... ज्वर (C, V).

Typhoid stage:
Death:
Pneumonia.
Enteritis.
Asthenia.
Uremic poisoning:
Coma and convulsion.

(ii) Cholera Sicca ...

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-I pp 36-45.

मौौह, तदा (C).

Alasaka चलावक !

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 द्रष्कालस्क 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.”
Dyspnoea
Hiccough
Belching
Tympanites
Cries for pain
Retention of urine and faeces

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

दल, चीड़, नख अभाव (B) ・・・ Blueness of teeth, lips and nails. Cyanosis.
अयासंद्र ・・・ Slightly conscious.
चुचू जन्मविद्या ・・・ {Eyes deeply sunk in the orbit.
भ्र्मानयायानेन: (M) ・・・

वमन ・・・ Vomiting.
नीऽ ・・・ Loss of consciousness.
शामकर (B) ・・・ Weak voice.
विस्तृतकुम्भि (B) ・・・ Looseness of joints.
श्र्र्न (S) ・・・ Cessation of stools entirely is a symptom of evil omen.

Pośdikā mahatānā SHOULD BE ABDUCTION.
Chalēm cōmēnt dhū yōgya bhātātēnīya śankhēat: ।
Hulādīn kūba tīvraśū chūrūtīśārāvartija tān ॥
Kuṭāraśūtāśvānā yātra pratīyākṣya kūja (t) ।
Nībhaḥ mahatāyapya kuṭāpūparāṣṭhā (t) ॥
Vātavārṇīnirōśha kūca viśa vyahāvāt ॥
Tākṣāsakakaṣāyaḥ vishīdāraḥ tu vyahā tu ॥

Suśruta Saṁhitā, VI. 56.

Caraka recommends common salt and hot water to excite vomiting in the treatment of cholera: तव शास्मार्य प्रदुःखनक्षरी-भुतमुखिष्येत्, पाषविल्य लभ्यामुखन तारि।
(iii) In the variety called विलम्बिका or दष्कालसर्त we find the following symptoms described:

दुष्कृत मूलं कठोरमध्यां प्रवर्तते नौदंशेष यथा।
विलम्बिकां तां भष्यदर्शिकानामाणं मानविन्दः पुराणं॥

Suśruta Saṁhitā, VI, 56.

भष्यदर्शिकाः—प्रवालखायोपचरणीं। प्रदसाध्वेषित एतहदः॥ (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 सूचि 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.

सूचीभिरित मागाशि तुदमसलिङ्गतिनिवच:॥
यथाप्रविल च वैमहिमिर्तिनि निमितदेः॥

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: तदम विपक्काधिरीप्तम् प्रायः न मिति तदद्याधिरीप व्यक्ता न समवत्ति शत: प्रायः नामितिः॥ (vi. 56).

The following abbreviations are used:

(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 Ahron 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 ‘Teonta-hinfa’ 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 Śitalā, 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 Brahmans at the inoculation with small-pox, which has been practised there from the remotest antiquity.”

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

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 Brahmins 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 smallpox 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 Brahmins prohibit when the diet is restricted. Holwell himself saw no reason why such pestilent animalcules, 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.”

The Antiquity of Vaccination in India.—“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 Ampthill on behalf of the Hindus of having practised vaccination many centuries before it was, to use his own word, ‘rediscovered by Edward Jenner. Lord Ampthill 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 Ampthill 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 Ampthill 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 Ampthill 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
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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'Esour 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 Sudha 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. Blaquiere, 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 Śākteya 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, Vṛṇḍa 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. Thespotted 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 Brāhmīns 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 Śitalā which I have quoted below from the Kāśikhaṇḍa 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 mūdrā,—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. Śitalā 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 Śitalā is the Pauranic adaptation of the Vedic Āpo Devī who is also described as the mother. The
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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 Sindhudvipa Rṣi in the Gāyatrī metre:

"शापोहिता समोभव सामुक्रदायतनः महीर्याय चच्छे।
शोष: शिवतमोरस: तत्वभाजयते नन:। अस्तीतिविव मात:।
तवायस्यां गमाम वो वश्च चवाय, निश्चय शापोहितयथवन:॥"

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. Saṃ., 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. Saṃ., 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. Saṃ. (vi. 4, 9, 2) and Kauśitakī Br., (xvi, 7).

The application of cold water in hyperemia 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 Śītā. So it is difficult to decide whether inoculation, not to speak of vaccination, was practised in the Vedic or Puranic ages.
The following descriptions in Sanskrit refer to the practice of inoculation and vaccination:

"धनुशाक्ष मधुरी वा नराणाथ मधुरिका।
श्वेतोत्सव क्षतपूर्ण वाहसूचितो विचारि सेवेः।
तहां सुरूव रक्तमिलितं स्थीताष्टरे भवेऽ॥"

(श्वनारीकर्ता शास्त्र यदि 1)

"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."

"धनुशाक्ष मधुरी वा नराणाथ मधुरिका।
ताहं बाहुसूचिस्म भ राजेन रक्तीत्वादु।
बाहुमूलं श्वेत रक्तपूर्विकर्षेऽच।
ताहं रक्तमिलितं स्थीताष्टरे भवेऽ॥"
"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 Sākṣeyagrantha, quoted in Savda Kalpadruma, Vol. V, p. 3311. Binodelal Sen’s Āyurveda Vigānāna, Vol. IV, p. 178.

(iv) Syphilis.—Was syphilis known to the Vedie 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 Jāyena to be syphilis. (Am. J. Ph., 11, 820; Hymns of Av., vii, 76, 559-561). Keśava and Sāyana identify the disease as rājayakṣma, i.e., the same as Jāyena in the story told at Tait. Saṁ., II, 3, 5, 1-3. (याज जायेनयाः बिद्वतु। स जायेनवस्मिन प्राणीति। निरक्ष जायेनवस्मिन जायेनप्राणिम।) From the remedial agents used in the Kauśika practice, viz., the string of a lute and the vivina plant (andropogon muriatus)—Bloomfield says, “I am tempted to regard the gayana as syphilis, etymologically either congenital disease (root gau), or venereal disease (gāyā ‘woman’); in that case the musical instruments may refer to the nautch girls, and the disease is cured homoeopathically 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 Sūrsuta 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 Hessler’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.” Haesser 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:

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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 Upadāṁśa. 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, in spite 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 Feraṅga 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 gonorrhoea 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 Mediaeval 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 Sahagun—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 Española 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 hydro-therapeutic, 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?"

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 pharmacopoeial 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.
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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.”

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 Woodword, 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

"The Wellcome Historical Medical Museum"—Preface.
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."

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

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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
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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.
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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 1763. 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 Viet., 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 Tsche-u 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."

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."

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.”  

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.”

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 jādiughur, 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 Ayurvedic 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 Brahmans 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
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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) Ancient 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.

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

(8) 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.

(9) 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 Anaesthetics.

(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 ancient 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.

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

(γ) Ancient dental instruments and appliances.

(δ) Ancient instruments used in veterinary surgery.
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(i) Historical apparatus connected with the discovery and use of anaesthetics.

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.
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(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."

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

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 Archæological 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 anatomicæ 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 Sussexiana, 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 smallpox, 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 diagrams, pictures, and magic-lantern slides than by written descriptions. To help students in their study of history of medicine various devises may be improvised. As an example, let me mention the Historischer-Medicinal Kalender:

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*. 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 booksellers 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

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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 persuant 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 remarks 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."

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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 Nitra, 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, Asafoetida, 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, Talc, Tannie 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 Rgveda,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 Ayurveda or the Science of Life. It is said to be an Upaveda of Rgveda.⁴

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

¹ भिष्कुमन्म ला भिषजज्ञ भोमिः। II. 7. 16.
² प्रथमो देवो भिषज्। Ch. V.
³ AV. II. 9. 5. Bloomfield's Translation.
⁴ अखेलस्यायुपेत्य उपवेदः। Corana Vyūha by Vyāsa.
HISTORY OF INDIAN MEDICINE

Atharvaveda before he created the animated beings. It consisted of a hundred thousand ślokas or verses, divided into a thousand chapters. But considering the short span of life and inadequate intelligence of man he recast the book into eight divisions as follows:

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. 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. 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.

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1 रज्जुवरुणी नाम यदुपालभविवेद्यानुपायम् व्रज; सीकासमस्य-मयायसदसूर क्तवानुः सत्यम्। ततोप्रकायमनस्यदक्षार्थीकं नराणां मुनियङ्गोपथर प्रसंवतवन्। तवया। शब्द शास्त्रम् कारणेक्तियत् भूतविदा कौमार-लक्ष्म्यमहात्मसः रसायनतल्ला भक्तनिधित्वमिति। S. S. 1. i.

2 तव शब्द नाम विविधार्थकायाद्धापमायुक्तीकोविद्यविवादकन्यायमपरमेक-श्वेतपावर्णम् रावणनारायण्येश्वरप्रभुविनियमवध्यं। Ibid.

3 शास्त्रम् नाम जयं जयं जयं जयं स्त्रीपायो यममप्रभुविनियमवध्यं। Ibid.

4 कारणेक्तियत् नाम स्वाभारास्त्रमायो वैदिकं अरात्तिसारारुपविनीमीर्माल-स्त्रबार कुमारीदातीनामप्रभुवध्यं। 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.\footnote{भूतविद्यानाम देवमुर्गमार्गयचरणं विद्विशाच्यान्यहासयुपस्तवषेवितं मानि-कर्मविलिवसर्दि यथोिमनाथं । S. S. I. i.}

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.\footnote{कौमारभृत्य नाम कुमारमन्दधातीचिरर्दिविश्वंशोधनायं तुष्टस्यस्तुवस्यानाय आधीनसाप्तस्यमनाथं ॥ इबिद ।}

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.\footnote{अगदतंत्र नाम संपकत्तुलाक्ष्मीशिकाकालदिविश्ववशानाथं विविध विषवंशीमविषविशेषप्रतीयमनाथं ॥ इबिद ।}

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.\footnote{रसायनं नाम संपककुलाक्ष्मीकालदिविश्ववशानाथं विविध विषवंशीमविषविशेषप्रतीयमनाथं ॥ इबिद ।}

8. Vājikaraṇa 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.\footnote{वाजिकरणन नाम संपककुलाक्ष्मीकालदिविश्ववशानाथं विविध विषवंशीमविषविशेषप्रतीयमनाथं ॥ इबिद ।}
HISTORY OF INDIAN MEDICINE

In the Caraka and Suśruta Samhitās, Brāhma 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 Brāhma, 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.”

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. 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, opiferque 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).

Wotton 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.”

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 चति इतिहासिकायामानवेत्तरस्त्रयने, etc., proves it beyond doubt, to be a commentary by Hemādri.

References:
1. Srātra Saṃhitā, I. i.
2. Bower MS. (where he teaches the Aśvins about the Chebulic Myrobolana).²


² Hoerule’s Ed., Ch. XI, p. 164.

³ सुखीपविद्वं अभ्राणमानैव वाक्समुच्चत्।
कुती हरीतकी जाता कतिलासिचित कीष्यते।
* * * * *
* * * *

एततेऽस्य यथावृहं भगवं वल्कुलयोगिः।
ऋणीयित्वं उलौ शाप्ता वचनमभयेत्॥
4. He is also referred to in the Brahma Vaivarta Purâṇa\(^1\) as the originator of the medical science from the four Vedas.
5. Aṣṭāṅga Hṛdaya Samhitā, 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. Ayurveda: This has been described before.
2. Brahma Samhitā: Bhāva Miśra alludes to this work as being composed by Brahmā.

Formulæ ascribed to Brahmā:—

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<tr>
<th>Name</th>
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<th>Author</th>
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<tr>
<td>2. Vatakumlāntaka Rasa</td>
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<td>3. Caturmmukha Rasa</td>
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<td>4. Āṃvāta Gaja Siṃha Modaka</td>
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<td>5. Vijayāmunda</td>
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<td>6. Sūtikāghna Rasa</td>
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<td>7. Nilkanṭha Rasa</td>
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<td>8. Mṛtaśaṅjivana-agada</td>
<td>C. D., p 344</td>
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<td>10. Vṛhat Sāraevata Cūrṇa</td>
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<td>11. Candra Prabhā Guḍīkā</td>
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<td>p 119</td>
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¹ त्र्यो धूलाःश्रृवःष्टिभिः प्रजापतिमिज्जहन्।
² विधातास्यस्त्रयस्माध्यव्यवः प्रकाशयन्।
³ मद्यः प्रकूलः रत्नः गोहस्त्रम दादाश्चुत्तमः।

Brahma Vaivarta Purāṇa, Brahmakhaṇḍa, Ch. XVI.

GOML, XXIII, 13242.
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<tr>
<td>13. Mācikāsava</td>
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<td>14. Daśasara Sarpi</td>
<td>Vaidya Grantha, GOML, 13220</td>
<td>&quot;</td>
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<tr>
<td>15. Karpaṃpta Taila</td>
<td>Rasa Saṅketa Kālika, p. 30</td>
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</table>

1. **Sarvāṅga Sundara Rasa.**

2. **Vātakulāntaka.**

3. **Caturmmukha Rasa.**
4. Áśamavāta Gaja Simha Modak.

भातात्मकमहसंविनादकः

धृष्टीचूसरं प्रश्रृंखि समानावच पदान्तं

गौरकुश पति च धन्याकुश पदान्तं

पतैं भस्मुपाया लक्ष्मी पदान्तया

उष्णश्रव पतं भृंग सरस्वत पदान्ति च

विहार-विन्दु-चार-पिरपिलोनां पदान्तया

भवन तेजपवच विविकान्तः पदान्तया

प्रभु कृष्ण तथा वक्रः प्रतिवंतः पतं पतं

प्रेमसंग गौरीचूषानां ब्रह्म दयार शारवर्य

श्रीमण सपुष्प भववर्त वर्षमावतु मोदकः

एकां भवितः प्रतात्ति तथापितिवातः पयः

शुल्को राजमहाशास्त्रिविषयानां

भातात्मकलुच से मेधावी विचिनिर्मितः
5. Vijayānanda.

विजयानंदः

गृहयुतस्य भगवानं विभागं गृहवात्सकं।
धर्मादिप्राकरी पूर्वं खामयेव समनवं।
चयोऽर समं प्रलयस्य भवा तस्मोपरि विमितं।
वत्सं मल्लकपंते लिङ्गा शीतवेश खरातपं।
विमवशिष्यामस्य पथाः सीतलतां नयेत।
वल्लापे काभपावे खामवेदितयवत।

विभिन्नतं कैविनिधाभी द肚ं निर्वं विघरसं।
सर्वकृत्य निष्णुवात्स माततिमिरं यथा।
रसोऽयं विभवनां विभ्यो निर्मितं: पुरा।

विजयानंदनानायं निमुशः यसितमशक्षः।

6. Śūtikāghna Rasa.

सूतिकाघौरसः

रसगुमङ्ककोवार्यं जातीकोथं सुरवर्णं।
सधारं महायेव खर्णे भारतरक्षेन पुरयेव।
गुर्राभवभारिणे वटिकां कृष्ण यथा।

क्षरातीसारोगम्भरः: सूतिकाघनानानमः।

सूतिकाघोरसी रसी नाम वद्यस्य परिकृतितं।


शीलक्षोरसः

सूतकं गम्भकं लोकं विषं विककप्रयर्कं।
वराक्षेपकांथं मयाधावनागकैवरं।
विकलक-विशका चेव शुलभं तद्येव च।

एतानि समभागानि हिदुरोहदं च।
8. **Metasañjīvana Agada.**

śvaśātyarāja

पकासावकाश्यकाराकोलियोरचनानागरस्।
ध्रामकं कुमुमं मांसी सुरसायिलावकुड्रस्॥
हस्तीराजपुप्पु-श्रीविषाणप्रेमचंद्रस्वामीगाँधालेः।
सुपारकपौरे-शामरकमने:विलाकाकल्यः॥
जालकंपृपासंख्य-रजनीयकंपतुपप्पलीशा:।
जयसुद्रयीमधूवसंदरकवल्लकिन्नरवाराय॥
सम्भाकोधमयरकवल्लकीनाकुलविक्राणः।
ृष्णीषीदृढ़ समं पिठा गुड़का बिधिया: सूः॥
जनाृविश्री लवकाल विपक्षस्वात्त्रीवनी क्षरभिनेना।
प्रेमविश्विपवारमेवृवस्यैःपुरुवेशः॥
सुपृविज्ञसल्लकीकाश्यकमनाधमश्रीरूदु:जयाम॥
दु:स्वात्त्रीदीपाकल्लकामधावीचरयः॥
धामानमार्कायस्वति-शीषुद्रुविःवर्णवीनी धनः।
श्वाशायवन एव प्राणचंतवात्त्रशेषविकृतः॥

9. **Vṛhatr Agnimukha Cūrṇa.**

सहस्राश्रुः परशुः।
षी चारी चितकं पाता विकृतं ज्योषिति च।
चुप्पं ते समर्भार्गं कार्ती हिंदु श्रीरकम्॥
10. VRHAT SĀRASVAT CŪRṆA.

कुष्ठायामेव लवणामोहै वे जीर्ष वीर्ष तदुपी वाता।
मांश्चल्पुः च समानि चर्मः क्लालः तु चूर्णिन्व वीर्षवेल्व।
तद्योगम युग साध्यो रचयिते ब्राह्मनिर्विन्दितायाः।
सांवस्यां च तमोदामां विलोक्तः सन्तः दिन्दिताः।
11. Candraprabha Guṭikā.

चन्द्रभा गुटिका ।

सौरभीयमानमयमस्तमासितात्मकं
भूविविभागामुरुणाचार्यायं च घातकम ।
भावयमविविभागितायथं तत्तिजङ्गानिः
कथं कथ्यतः पुराणपरं सैण्डीकानावलम ॥
लोकात् सिद्धतात्त्वयुतं सांपथिकाया: पलं
हस्तां श्रवणेत् यूजः। गुजासमपं शरयं च चत्रं
कालाम ॥

नारायणसंयोगीलोककु षी दैवस्याविन्दधरीन्
महायं समस्तं कपोलसिंहिकों व पान्नुभासम ॥

सं तं याधिकमुख्याक्षरितस्मात्मायुद्धस्वयं
सेनांकु च विविधाकलादस्तं देवहितात्
व्योपितहलाम हठमनेन विचित्न चन्द्रभा श्रीमति
मन्त्रः परम प्रदंपनमित्यं कर्षणाः जन्तलयम ॥

सेनाकारबिच्छी च पान्निषिद् शीतानापं सैणुः ।
मुक्त नारि विरोधितं च सतं ग्रीषा तुरा प्रदासम ॥


सायमभुवी गुगुलु: ।

स्विदिग्नानां देवपति दत्तविलाल्य गुगुलोद्येह च ।
तामः पलतवव: इ लोकानां बचिकायाय 
विप्रलक्षान: पत्तामणविद्याल्यो श्रीवचचिभिमनो- 
मुखार्निका ष्टुस्ताश्चायकात्जय ॥

Māvīkṣaṇaṃ: ।

Māvikṣaṇaṃ: शताधूँ तू दोषिपां च विपाक्षिते ।
बतुष्कंशिव तथिषु दूर्तं शीतं प्रदायिते ।
गुड्धय विश्वं दला तत्स्रवं धन्माजने ।
विक्रपिपक्षिकशालाजाताकेस्वरैः ॥
माविचैं तथा चूर्ण सम्बुक्ता विचचिथयः ।
विपश्च पतिकेन्द्रिवेत्तनीयं समनवतः ॥
सति यथाय सिंह वालास्वरुपमात् ।
प्रति यथायां सम्बुक्तं समनानकारकः ॥
Māvikṣaṇaṃ दले ब्रह्मा निमित्त: पुरा ।


Dasmāra सर्प: ।

वाशागृहीपनिमुखी ह्रदीत्वस्याराट् ।
काशामर्दिक्षिते भूसिष्काथायोहृतंवनिबिक्षिता ॥
समुद्रपारं निमित्त: कुडूङ्केन प्रथक्ष प्रथक् ।
सृजनानन्तु प्रथेन समानानं प्रथेयत ॥
कासमान प्रथविधानभु ॥ ** ॥ यानेकदामकः ।
Dasmāraसर्प: ब्रह्मा निमित्त: पुरा ॥
15. **Karṇāmṛta Oil.**

कर्णाम्रतं तेलम् ।
रामां निस्सप्तचिथि जीनः सामारसत्वः ।
एतानि समासानिः वद्रेवं चिर्तं विषम् ॥
गोमुवेश्च समासुचकः कटौतीलं विपाचितम् ।
तेनेव पूर्बेकर्षं नरक्षरवासिनाम् ॥
कर्णायोगिन महक्षाय लिपनाभिषिक्षितः मदान् ।
नाथं कर्णाम्रतं तेलं ब्रह्मण निगमितं सयम् ॥

16. **Sahacara Oil.**

सहचर तेलम् ।

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 Agnivesa as instructed by Punarvvasa Ātreya, mentions Bharadvāja, as the disciple of Indra. He taught Punarvvasa and other sages. Punarvvasa Ātreya imparted his knowledge to his

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¹ **Suśruta Samhītā, 1. i.**
² **Caraka Samhītā, 1. i.**
six students, Agnivesa, Bhela, Jatukarna, Parasa, Harita and Ksharapami. Caraka redacted Agnivesa’s work, and Ddhavala supplied the last forty-four chapters and edited the entire compendium.

In the Brahma Vaivarta Purana, Brahma is said to have given the Ayurveda to Bhaskara (the sun-god) who is represented as the fountain of all medical knowledge. Dhanvantari, Divodasa, the Asvin-pair and others learned the science from Bhaskara, and composed original treatises on medicine.

Vagbhatya II is of opinion that the sons of Atri and other sages learned the science of medicine from Indra. Arunadatta in his commentary mentions Atreya, Dhanvantari, Nimi, Kasypa, as disciples of Indra. Atreya’s students were Agnivesa and his colleagues.

Bhavamisra describes Indra as the preceptor of Atreya, Bharadvaja and Dhanvantari. Atreya was the teacher of Agnivesa and five other sages. Dhanvantari taught Susruta 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 Ayurveda when Narayana rescued the Vedas in his Fish Incarnation.

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See foot-note 3, p. 6.

1. Astanga Hrdaya Sambhita, I. i.

2. अष्टांग आप्रतिष्ठित आदिविधियों धात्विकविनिमित्ताय यात्रीमां त एवं ते चाविकाध्वीधिश्रि-वेशदिकानिविषयम्।

Sarvanga Sundara, I. i.

3. Bhava Prakasa, I. i.
VIŚṆU

In the Rgveda, Viṣṇu is described as striding through the seven regions of the universe in three steps—a legend which the Pauranic authors dilated upon and which culminated into the story of “Vāmana Avatāra” or the Dwarf Incarnation of Viṣṇu and Vaiś Rājā. Yāśka and his commentator Durgācāryya 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.” In the Mahābhārata and the Purāṇas, he is the second member of the Hindu triad and is known as “the Preserver.”

1  भो देवा भवंत नि यता विष्णविबचकमि।
प्रविध्या: सम भासमि: II 1 4
पद्म विष्णुविचकमि तेषा नि दधी पद्म।
समुद्भमस पांडविरी II 1 7
वीर्य पद्म न वि चकमि विष्णुविपा चन्द्राथ:।
भो दमारिण धारयतन् II 1 8

Rgveda, I. xxii.

2  यदिद्व विष्णु तत्कथिकमि विष्णु:।
तिथा निधले पद्म। वेषा भावाय प्रविध्या
चन्द्राणि दिविर दति शाक्ष्यूपिणि:।
समारोहिणि विष मद्द गद्दिर्मिर दति भोष्माव:।
Nirakta, 12. 19.

विष्णुदिविक:। कामिति यत धां वेषा निधिपद्म निधिनि पद्म निधानम
पदे:। क तस्तु तवमु ति प्रविध्या। चन्द्राणि दिविर दति शाक्ष्यूपिणि:।
पारंविविमूल्यि प्रविध्यां यतैकिकिद्वशि ताधिसति तदधितिहिति।
चन्द्राणि वैद्यकोमण। दिविर निधि भावानान यति तस्मू भक्ष्यन देशा मृति कामिति।
समारोहिणि शदत्यरां तद्युन् पदेयसं निधिने।
विष पदें समाधितेन चन्द्राणि।

gadārājyaṁ sīrśa iñati bhūṣṭāvam bhāsārāmyaṁ smārti

Durgācārya.


संस्कृतिविविचित्रविश्वासविबिधामवक 
संस्कृत साहित्य भाषाय एक एव जनाइहें;
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 (līl.—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 M.S., 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 Candrika, Sivadāsa explains the name as derived either from its author, Viṣṇu or Nārāyaṇa, or from the principal drug ‘Satāvari’ which has a synonym Nārāyani.³ The formula has however a distinct name Siddhārtha, and it is elsewhere ascribed to Viṣṇu.

Formulae ascribed to Viṣṇu:—

<table>
<thead>
<tr>
<th>Names</th>
<th>Authors</th>
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<td>Šataślokī, p. 48.</td>
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<td>Sāraṅgadham, p. 161.</td>
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<td>Bower M.S., p. 188.</td>
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श्रान्तेन श्राजः च व विष्णुवेश पाति नवम्यः।
सद्ये च व श्राहं एको द्वितिधिं श्रियतः॥

Agni Purāṇa, Svargaṇaśsara Chapter.

विष्णु सद्यथं च चर्चर्चितं विभस्तः।
नारायण नामवहः यज्ञान स्वन्नान्तः व्योऽहतः॥

Cakradatta, l. v. 183.

Gada Nigraha.

¹ Bower M.S., p. 188.
² नारायण संशा चाय विष्णुविशिष्टवान्, शतावरी रस साधितावान्।
³ Tattva Candrika, Vātaryādhi Cikitsā.
### Names. Authors. Books.

3. Svalpa Nārāyaṇa Taila  
   
   Vīṣṇu Taila  
   ।
   ।
   ।
   ।
   V. S. XXIV. vv. 283-292, । p. 373.
   Bhaiaśajyaratnāvali.
   ।
   V. S. XXIV. vv. 268-275, । p. 371.

4. Madhyama Nārāyaṇa Taila  
   ।
   C. D., XXII. 66, p. 155.

5. Mahā  
  ।
  ।
  ।
  ।
  V. S. XXIV. vv. 303-315, । p. 375.
  C. D., XXII. 67, p. 135.
  V. K. V., p. 213.

6. Vṛhat Vīṣṇu Taila  
   ।
   V. S. XXIV. vv. 268-275, । p. 371.
   Bhaiaśajyaratnāvali.

7. Vṛhat Śṛgāra Abhra  
   ।
   R. S. S., pp. 290, 484.

8. Nītyodaya Rasa  
   ।
   p. 291.

9. Āmavātesvāra  
   ।
   p. 342.

10. Sarvāṅga Sundara Rasa  
   ।
   p. 351.

### 1. Nārāyaṇa Taila.

नारायणतैलम्।

विलायिनम: ग्रौंधक: पाठम: पारिष्ठ्रकः।

प्रमारṣ्यवस्त्रा च भ्रडति कम्पकारिका॥

बला चालिवला चैव बर्दवा सुनगर्मवा।

एवं दशपलान् भस्मायुतस्विद्धाशः: पतित्॥

पादश्रयं परिष्ध्य तैलपत्रां गुप्तापवेदुः।

शल्पुषा देवदान्म नांसति शैविध्वं बचा॥

चन्द्रं समरं कुडसिला पार्श्वचतुर्दशः।

रश्का तुरगमशा च शेषवं सुनगर्मव॥

एवं विपलिकान् भागान् पेष्टिभला विनिमित्तित॥

सतारविश्रवेण तैलां गुप्तापवेदुः॥
2. **Satāvarī Tāila.**

शताब्रीरश्रवण्यं चौरप्रयं तथेय च ||
शतपुष्यम् ईश्वराः सांसी शैलेयकं वल्ल ||
चन्द्रं तगारं कुमारला सांसमति तथा ||
एति: कांसिमेश्वरेण्योऽध्यक्षज्ञानम् ||
कूटसमस्तां सांसमुपस्तितम् ||
वालुका मधसना: वेदवाणीविनाम नमः ||
जगद्भर्गदेवाः वसंतसरसोऽविवाहाः ||
लाभार्थाय य वाताः: सिरामायुगताय य: ||
सुखासारशङ्कुवः तेल: नायतां संयोः ||
नारायणद्वित्तिनां नाथा विश्वनाम समदायतमः ||
दशाश्वमिति विश्वार्ते न कृष्णदत्तायद्विं ||

This is the popular name of Nārāyaṇa Tāila. An English translation of the formula is given in Dutt’s Materia Medica of the Hindus, p. 261.


5. Mahā Nārāyaṇa Tāila.
VIŚNU

वेशिवं तवार्थं कुङ्ञमिया सांसी धारा वल्ला ।
चत्वार्था दस्तवं राधा पलाहारि च प्रवेदङ्गु ॥
सार्वाजपश्रीः प्रस्थी दी हान्य प्रदायवितः ।
सताविरेसप्रस्थः तैलप्रस्थः विपायवितः ॥
पत्ति तद्वर सिद्धः गणे वीयमहः परम् ।
चत्वार्थां वातमहाणां कुङ्ञारणां वृष्णा तथा ।
तेषस्मितत् प्रदातव्यं समिवातातनवर्षम् ॥
जापणां नरः दीपला निश्चीत हड़ा भवेत् ।
सम्मदिवती विन्दात् विं पुनि मारनुरी तथा ॥
च कांग पार्श्वेण मद्यवधानं हनुमात् ।
पवति मद्यमां वात्तरां जनुपजस् ।
कांगनः पार्श्वरोधः प्रमोदीचापि नामवेकः ॥
तेषस्मि नयनमयता चित्राणा परिकीर्तितम् ॥
सार्यगूनिति व्याले वातालकरणं परम् ॥

Vṛhat Viṣṇu Taila.

उद्धवाति तेनम् ।

आलंकारादिजोकािययकां शानी ।
काकनी चीरकाकाय जीवणी समुच्छिता ॥
समुरिका देवदार्श पदभावः सम्भवः ।
सांसी चैवला लघु कुङ्ठ रक्षणस्वमेलवः ॥
सम्भवा ज्युतानिश्च शिंदन्तकुकुलस् ।
पश्चार्थः कुङ्ठव निजिश्च यथिकका नक्षी तथा ॥
पतं चालक्षेत्रिकारकापाय लघुद्वां ।
शताविरेसप्रस्थं दुःखापि समभवेकः ॥
विशिष्टेक्षरं श्रेष्ठ सम्वातातनविकारनु तु ॥
नारायणशरीरस्ते तेषा सम्बाह्यं गाञ्जः ॥
वस्थ गृहानि चैखाण्ड गतिव्यं च विश्वला ॥
6. Viṣṇu Tālā.

विष्णुतालम्।

शालप्रवत्रि प्रश्नियाँ वन्ता च वहुतविलक्।
एकहस्त च मूलाक्षि वत्थयि: पुतिकस्था च।
गवर्धकस्य मूलाक्षि तथा सहवर्ध्य च।
एवानु परिविन्दः कल्याणीयायां हिप्पाचिंद्र।
आज्ञा वा ददि वा गाय सीर ददाबचक्षणम्।
भव तेजस्य पक्षम् द्वार निरविचनः परम्।
एवान्त प्रवत्राणां कुमाराणां तथा कष्णाम्।
तैत्तिर्येऽनु प्रदीपाणां स्वर्याक्षिभीवार्तः।
आदल्ले वरः पीला स्वायत्वन हँड़े। भवेन्त।
गंगाभरती विन्दादः तिं पुनर्माधुर्यि तथा।
एकक्ष यथार्थयः तमा वर्तावादविसेवकम्।
कालोपसर्वरूपः शंकराणासरीनाशमस्त।
हीनिन्द्र्या दशगुष्णा जस्य नर्मिर्मित्वः।
नैवाच्छेद चतुर्व अध्यक्षकस्य दानशा।
भौवतं गुरुकर्षणं वामा विषयतनिमः।
सिंहिः या न प्रमुखे तासाहृत्र प्रथोक्षितैः।
एसद्रक्ष वरं तेषां विधा परिक्षितम।

7. Vṛhat Śrṅgāra Abhṛā.

हस्तश्रुव्यार्थम।

पार्द गन्तवकाव्य ठड़ा नागकीर्तः।
कपूर् र आलिकोशः लब्रः तेजस्वः।
एतेषां कर्मभास्वपन्य सुवर्णं सत्तपूर्न मन्तृं।
गुरुं ज्ञानवन्तरः च तृतीयादिपरिधानां।

नित्योदयरसः

चूर्णं पार्दश गर्भं प्रदेशं योगिकोऽभिस्वरते

ततः काजलिकां कला महीयति प्रको प्रको

विलासार्गमास्थीनां कामरीपाठला चला

सुप्तं पुनर्भवं धातवं हस्ती द्यपवकं

विदारी वच्चुवची च एवं कर्तर्सभिंधकं

सुचवं राजसं तापं प्रदेशं शारदमासवं

पल्लवान्तु क्षणांगं तद्देवं रिलाञ्जकं

आतीकोपनले मांसी तार्किशेला बनवकं

प्रदेशं कोलमातु बासानार्खिमांहृद्यति

शीशवर्जनं प्रत्यतं विदार्यां पंचप्रक्रियं

विश्वां वर्तिकां कला पिपलीवधुना महेशं

नाथा नित्योदयशार्यं रसी विष्णुविचिन्मितः

प्रकाशास्त्रं नित्यशाश्व विकाल्पीत्वादयां

राजस्वाभावं चौधुर्यविभिन्नशकं

भोजस्यं विश्वासयं व्यक्तियुक्तयं
9. **Amaṭëśvara Rasa.**

**Amaṭëśvarī Rasa:**

ग्रहणं प्रक्षेप श्रवणाय तन्मयमः
तात्तत्त्वं पारद्र गुणं रसतुलयं शताययः
सत्त्वं प्रक्षेपेन भावयेत् तुमः पुनः
सुचौं प्रक्षेपस्तीलोच्चः काथेः सतं विभावयेत्
रीट्रे विशिष्टं विविर्यारं गृहोच्च रसेण्डः
भद्रवयायुर्योग सुमन्न सद्व शिवेयत्
रीट्रे विदि दैवं मारिषं विद्विष्यां
तिलिङ्कीर्तानुक्तथ धृतत्वथ दनिकः
विकटकवल्लपत्र सवर्धांभास्मिः
**Amaṭëśvarī नाम विण्णा परिक्रमिष्टः:**

महायिकारख्च्च ग्रहणाय काथे नात:- गुरुः
सहानां कारणः वेदः क्रान्तां स्रोताकारः
भद्रवयायुर्योग संस्कृतस्वश्चानः
भद्रन सहवं नान्तिन्तिरिक्तिरी महानः
गुरु: गुरु: गुरुः-श्रवणीया-श्रवणीया-पाण्डुलिपिः

10. **Sarvāṅga Sundara Rasa.**

**Sarvāṅga Sundara Rasa:**

ग्रहणते तथा तात्त्व मिलाविचित्रतातः
रजतं स्वस्वक्षा लोकसमं समासः
चौविश्व विद्विष्यां दैवं सेर्वनात्तुलवधानः
गामकं विद्विष्यां सतं रसिरेषां विभावयेत्
गुरोऽज्यानी-विज्ञानी-महाराजीक-मुनि:
Reference:

1. In the Bower MS., 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. This practice is still in vogue among the orthodox Hindus.

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1 Bower MS., p. 169.

2 श्रीष्ठि विनयविष्णु’।
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 Rgveda, 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 Gṛtsameda:

"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 Rgveda, we find that sometimes Agni and Indra are called Rudra. In Rgveda, i. 27, 10, (Sv., i. 15, and Nir., x. 7 and 8) we find: अग्निः सङ्कारितः तद् ** ** ** स्यान्यः स्वातः हृदीकं। 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 Āśvins respectively. Thus we find that the Āśvins, Agni, Mitra and Varuṇa are called Rudras. He is said to be the father of the Maruts.⁴ Pṛṣni 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 स्यान्यक्रियते; 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, Nila-kaṇṭha, Sitikaṇṭha (xvi. 28), Kapardī, Vyuptakesa,

² चापिरपि रुद्र उपयते। Yāska.
³ लम् चप्रे रुद्री भसरी etc. Sāyaṇa.
⁴ सद्राय: सद्रुष्या सहत:। Sāyaṇa,
⁵ सद्राय कूराय छरदे। Sāyaṇa.
Sahasrākaṣa, Śatadhanvā, Girisaya, Sipibisṭa, Miḍhustama, Iṣumān (xvi. 20), Śaṅkara, Śiva, Śivatara (xvi. 41). Besides these, the other names of Rudra are mentioned.

Max Müller¹ identifies Bhava with the Greek sun-god Phoebus, according to phonetic laws. Weber ² thinks the original meaning of Rudra to be thunder (Root. Ruda to shout).

His works:

1. Āyurgrāṇṭha: The Book of Life. Śiva is said to have written this work in the Tretā Yuga, 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 ochre.

(iv) Abhrakalpa: a treatise on the properties and medicinal uses of mica.

(v) Haritakīkalpa: It treats of the uses of myrobolan.

(vi) Dhātukriyā or operations with metals: It is in the shape of a dialogue between Śiva and Pārvati. “The

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 Rūma, the Arabic name of Constanti-

nople.”¹ The book is also called Dhātumañjari.

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 Cakrapanidatta 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 Rgveda and to have been revealed by God Parama-siva to Goddess Pārvatī.”

Beginning: कैलास गिःखः रच्ये पारम्पर्ये परस्तश्रयः।

शन्योपासुखशीलायेण प्रभादिमहाकाये॥

* * * * *

* * * * *

सर्वेदकृतमिति गोपः सर्वेदानुस(व)दानकम्॥

चायुर्वेदसिद्धेण नाम सर्वज्ञानसतासूक्तज्ञम्॥

End: चययकोपप्रशस्मावयोर्यमातिदिषु निशु।

वर्षादिषु च विपश्च श्रोत्स्तः विस्मितादिषु॥

परे दैवतविषृण्डी सधे साहन जायन।

जन्मे श्री च श्रवंशेण कीर्तिदेव शाहैयामान:।

Colophon: द्वित्य व्याख्यं समासम॥

² मैदानिकालीक भियानुकिर्दिस्थम॥

Cakradatta, Rasyananadhika, p. 366.
Ibid: MS. No. 13087. "Similar to the above. It is written in prose in the form of śūtras. 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.


"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 स्वाय समवाय वाचिकारिष्यः

जनातरथ्यदारिद्वषवाचिकारिष्यः

कैलासविष्णुराष्ट्रमाणे कान(म)कघ्यमानम्

प्रसंव परमेशाम जगदन्त्याराध्यम्

End: पुष्पदेव काणयेन पुरुषपूवंबलमदा:

* * *

अलम्ब्र देहिकाली च धीर्रति शाशिकालमालः

Colophon: इति कैलासकाराय: समाम: ||


"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: कैलासविष्णुर्स्ये नागार्तस्मिन्ध्रिष्टि

नागाकल्याणाकाां गुड्दस्वाध्विष्टि

End: पूछ पीठ (पित्स) गति प्रभासनगितिः जानामघनप्रिय(यिय)तो—

सन्यन्त्रमयौं सुहािवंधरायं चक्राधिकराधिः(घ)वा ।
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.

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 Rudra! live within our body and protect it.

xvi. Śatarūtrāya
(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 Rgveda—

Rv. i, 27, 10 (Sv. i,
15; Nir. x. 8) : Rudra identified with Agni.
39 : Maruts, the sons of Rudra.
48 : See page 33.
64, 2 : Maruts, the manly youths of Rudra.
3 } 85, 1 : Maruts, the powerful sons of Rudra.
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114, 1
(Vaj. S. 16, 48;
Tatt. S. iv, 5, 10,
1.) : Kapardā is mentioned. Also see page 38.

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 Grītsameda.
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 : Pṛśni, the mother, and Rudra the father of the Maruts.

59, 8 : Rudra’s son.
60, 5 : Rudra and Pṛśni 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.
vi., 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, 8  : 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.

98, 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 Ṛgveda, 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-medicines.

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 formulae ascribed to Śiva:

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1. Cintāmaṇi Rasa.

विनामिरसः।

रसविक्रमकालेन तारायणां व्योमं।
तालककलवय च चांदः। शरं वाराणस।
संसहः रतिहितविविका काव्यां भविष्मिः। प्रादः।
गुड़ीपिंटिन समिकां चे क्वाच्चा लिखः। संप्रायः।
नारीकेलजलसनपरं संवेदनः।
संभवं तेजरं ताजपथं प्रकाशः॥

प्रशमंतिः सदिपात्जरं
तथा जीर्णजं विविधः॥

श्रीहान्ति चापालकं कारं बासं वक्रिस्माद्वधः।
विनामिरसीरचं किल क्षरं भैरवेष मिहिद्॥

2. Sucikābharanā Rasa.

शूचिकामरणीरसः।

रसगुल्मकालेन वियं स्वारंजलं।
मात्रवाराधिपतिकर्मिण्यो भवभेदः।
शूचिकामरणि नाम भैरवेष प्रकृतिसिद्धः॥

शूचिकामिरस दातव्यः सदिपात्तिवर्षः॥
3. 

3. Mētasāñjīvāna Rasa.

श्राग्गुल्त विधा गम्यं खरे तत्त् काचनवीतरि ।
शोभावीकोम्भवतासमसंसं संमं ।
विष्य तां वरादव विज्ञािदिकोलविकान्न ।
विशिष्टी वातमिश्र तूम्यः हैमासाधिकः ।
चूः विसेदविराटेऽक्ष्यं दिनवयं ।

निशुद्धिविज्ञानाभिविचिखिनिन महायेन पुनः ।
काशकुंलं विवेयाया वालुकायल्ल्ये पश्चि ।
वियामाने सहस्रया महावेदास्वातिः ।
श्राग्गुल्तीन्न नाम नरसोऽव महारिदितः ।

शतोषः सहिपाताराः जीवयेव न संधः ॥

4. Ardhanārīśvara Rasa.

अहीनारीशरीरसः ।

रसगंभीरं श्राणी विष्य वातावधं तत्संयं ।
मैथायं तत्संयं वाताखं विशिष्य चतुर्गुप्तं ।
विफलाया रसरां महावशा वायुत्त्व स्वयं ।
अहीनारारारवायविमासाधिकायुः ।
महीरारसायसे वीरं ज्वरं दक्षतं न संधः ।

अहीनारीशरीररसः नाम रसः शुभ्राकारणितः ॥

5. Sarvavatobhadra Rasa.

उच्चलोभरसः ।

विष्य गम्यं वायुं विष्य विष्य गुष्ठगन्तकः ।
तीव्रक तीव्रकािद्धं हिन्नोक्षरसायस ।
वापुरं वेदरं मानी विचार्यं वज्जयतः ।
आदिकोषाधान्यं उष्णीलाः कारिपिपाः ॥
6. Cūḍāmaṇi Rasa.

चूडामणि रस:

यत्र गूढः प्रत्यालः परथो तारण वादनः

मृलं सुमजा तीर्थाभं सुवृषिकं योजयत्।

कालस्निप्पत्तं च चरितं विषस्मित्वं।

कालित्वसुमुखं चिकित्सा गावस्य सुसम्भवं।

नित्योलं कर्षयुतं दनायुतं गलयत्।

वातपिंवसुमुखं वह्यं संसर्गश्वं।

कालवातं कवीयुक्तमप्रमाणं विमुखिकं।

कालकृतिम कामनं संवृक्षाकारिकं तथा।

तत्तुः प्राणद्वाय सुभव्यामिथ्वमुरुणं।

चूडामणिरसो खाय विमन परिवक्तितः।
7. Vṛhat Cudāmaṇi Rasa.

8. Grahaṅtiśārddula Rasa.
9 Vaidyanātha Vaṭī.

वैद्यनाथवटी।
रसस्य शाष्णं संग्रहं काशिकावं तु शोभयेत्
चिन्तकस्य रसमापिः चिन्तकायाय शुभिः।
रसाङ्कि ग्यात्क यथा भज्जराजसेय वा।
हाथा सम्पूर्णां जल्ल स्तरां: शास्त्रस्थितेः।
खंडेन्त शिलाखंडेन समरी वल्लभापारे।
निरुपस्त्रीमुक्ततावहते श्रीमानसन्धः।
चक्रार्दकाराःजय तथा प्रेममालात्रेषु।
सर्पपामां वर्ती जला दधारां श्रवणीगते।
सामवतेद्विब्रमाल्लों च ज्ञरे श्रीहीर्दंशु च।
वाचते भावकारिष्ठ तथा स्री प्रभदंशु च।
वखनकारिष्ठ व कुर्बित विच्यावं वसु।
श्रीमता वैद्यनाथेन लोकायतकारिष्ठा।
वधान प्रायग्रामेश्वम्यो भाष्टरि विचित्रिते स।

10. NrpaVallabha Ras

उपवधानो रसः।
आतीफळ-वच्चकाद्व-वर्षिका-दक्षरामचः।
ग्रीकतं तन्त्रवध यमानी विश्रेष्ठवर्धे।
लोकर्थं संताप्य रसर्गमक्षेत्र च।
सारिचिं विषाणं रूपं प्रलेखं विपलोभिते।
प्रोक्ति वर्तं क्रयं द्वियस्मिन्न विचुतसानां।
इन्द्र शूलं तथा गुप्तमानवातं सुवर्णं।

Mahārājā Nṛpatīvallabha Rasa:

Kṣaṭībīṣaṁ kartārmam rāhasyaṁ kṣaṭībīṣaṁ karmādhyakṣaṁ.

Kṣaṭībīṣaṁ kartārmam rāhasyaṁ kṣaṭībīṣaṁ karmādhyakṣaṁ.

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Kṣaṭībīṣaṁ kartārmam rāhasyaṁ kṣaṭībīṣaṁ karmādhyakṣaṁ.
12. **Mahārāja Nṛpavallabha.**

महाराज नरपवल्लभः।

माधवं श्रीलम्बधि बर्ता रजतदानकस।

यश्व यमानिका चोरेय तास्य नागरत्रुच्च।

शेषयेव बलकं मुक्षं धार्यं समधिकं रसं।

एकी कृपृ रक्षेत्रं प्रथेयं माधवोभिर्मात।

माधवं रामें व्यामश्रवियानं चतुर्यं।

जातीर्वं लघुकं पवेष्ट लोकोभिर्मातं।

माहेश्वरं विक्रुत्कं मासं वारथं विचं।

कर्पलं सविमपं सूपेश्वरं तदाधिपत्।

विवें कर्पमं संवं वामवीरिष्य रिष्येत्।

प्रत्युप्लवितं खाद्वतं सानायाः श्रीवत्।

श्रम्शा निमित्ती श्रीम पूर्ववद् गुष्ठकारकः।

नाब्य महाराजेऽपि चुपपवल्लभ उत्तान्ते॥

13. **Paścānana Vaṭṭi.**

पञ्चानन वटी।

सत्यमुत्तमलिङ्गानि सतान्तगमकीः कर्ष॥

सम्भोगि समभामानि महां सज्ज्ञिताकर्ष॥

वयस्वरूपकं तोऽदिव्रेणः पलायनं।

शायिकेन्द्रिकस्य सामायं पिरैकर्ष॥

परायं वैक्षण्ड्यं विचिवक्षा श्रवीरोदिता।

कृष्टरोगं निश्चलायं श्रुयकृतविनाशिनी॥
14. **Vrhat Agni Kumāra Rasa.**

हस्तदिक्रूकारो रसः।

हस्तसूत्र विधा सभं गब्धतुलच्छ टक्कः।
फलबंध्य यवसारं व्योरं पञ्चपुड्वृच च।
हादतीति स्वर्णिणि रसमुथानि दापेतः।
संस्मृतं साधा सबं भावदात्रेणवर्ते।
संमोक्ष चूऽविवला तु मणि‌दात्रेणहमुना।
शारावं वयो वैल्य नानानीर्ग्रहान्विद्।
रस्यादिक्रूकारो रसेष्ठेन प्रकाशितः।

हस्तदिक्रूकारतः व कालबखासरतेजः।

प्रमादावनामानुगानु शोधे पार्जनामयं जदेतु।
दुनामधसुदीसारीगानु दहिन्न संखयः।
विद्यालाखारेष्ठस्नायुि नियमः किचित्॥

15. **Lokeśvara Rasa.**

लोकेशरीरः।

पल्लं कपालेष्वरस्य पल्लं पारदगम्भीः।
सावध दक्षिणाय अभीराहित्विसम सैतु।
पुस्तक्कोशरीरावरो लोकायतृसोचम्।

अथे कुण रक्षाप्रतिच्छायानु रोगानु वालादवयत्।
पुष्य नीति प्रशादीकः पानिलावक्षः परः।
कौशिक लोकेष्वरादिति च शास्त्रसूत्रबद्वहः।
पय्यः हालोदनं सत्प्रदेशांक सिद्धांकः।
निन्ध्य यामजसुदारूः काये वारयं दिवा।
चावनद्वितिवध्वरि वा लगः: गृहो न चैतु पुषः।
षट्फीः प्रदातस्यः पूवंवत् कायपिढिहति।
प्रधाने स्वस्ति दीया लावःएसहुवः।

विरिहो नातीरामं मध्यः पूव्योपदितं यत्॥

चतुर्भुजः ।

चतुर्भुजः भागी हि भागिकं हेमभक्तः ।

शिला कसुरिका तालं प्रवेकं हेमतुल्यकं ।

चर्चं ख्रेस्ति चिया कल्या सहीविनः ।

प्रेमप्रेरितं धाबंमेवं दिनवरं ।

संख्या च सदृशं सर्वरोगिणू योगविद्या ।

एतद्वायनवर्णनं धार्मिकमहंस्मितः ।

तदष्ट व्याधिवं कर्मदौलोपविनायन ।
पशारे ज्वरे कासी शीते मन्दानके चन्दी।
हसाकेे मखरे कामे गायकमे विविधतः।
बावलिमसुखायं करणान् नामायिनूँ, वः।
सञ्जायिधि प्रयोगीयं आध्यो निरसाधिता।
कर्मभिम: पञ्चमिवेच मल्लियिधि प्रयोगमः।
सञ्जायिनू् नायाध्या वाचमिन्द्रानिण्यं।
तद्वृङ्खलसी नाम सञ्ज्ञेन प्रकाशितः॥

17. Sūtabhasma Prayoga.

सुतम्बकयियमः।
शर्मुष्टी वचा नायी कुहरिला रक्षे: सच।
सुतम्बकयियेरीयं रक्षकायनमानतः।
सञ्जायिनराध्याय सञ्ज्ञेयन भाषितः॥

18. Viśveśvaka Rasa.

विष्वेश्वरोऽरसः।
रसाइमुविषाद्पथ सम्बाइमु शीतातूः।
तुवाइमु पलाशस्थर भीरमः: पथ कार्कोटः।
षुद्वांवर्मार-धुपार-करतानक दीर्घः।
दशमं दशमं कुर्माचारीयिनिला जनालः।
दशमं दशमं दला कुम्भलाइमु नूतनात्।
भानाकाचे दशमं चूसिलाका भिष्कु ततः।
सुदिवसे वलिं दला वेंदः; पुजापराधः।
रजिका हितयं दयात सहते यदि मा च चय।
बातरजं अवरं चकं खरस्वरमसीक्षाबः।
अजायुवृक्षं विनिवर्त्त्व वासानं शरसं।
कुमाराध्यात्मिनिग्रन्धायसौरोऽच।
विवेकरी रक्षोगम विनिमाधिन भाषितः॥
19. Āmavātāri Vatiśka.

भाष्यातारिव वटिका।

रक्षणसंकल्पीः तुखं टर्कणेनम्।
सम्भां विस्मृताघ्नोऽन्नतिसुम्भविता।
सुगुणकृते: पादिकं दैर्घ्यं चिन्तामृुकस्पन्दितं।
ततु समं विचारकं दैर्घ्यं चतुर्गति परिरहते ।
खाद्यावस्थित्वा विकल्पूर्वत्तमं।
भाष्यातारिव वटिका पाविका भिदिका सता।
भाष्याते निन्दन्वायः गुरुयोगीश्वारविषयं।
वक्तुवीर्यराहीवरा-कामापात्तरीकचकान्।
प्रभृतीवः द्वाराखं वांतरौषधं स्थापितं।
वर्गमतं स्थलमालं किरिकं जगवन्दरान्।
विद्धिसमश्रयिष्ठ सर्वार्थं गुप्तान्तरितं।
भाष्यातारिव वटिका पुरंशानेन चोदिता।


शूलराजलीखः।

कृषिकोऽकारलीखः शुभवर्यं पलनः।
सिद्धाश्च पलिचेस्त स्पन्दितस्थितं।
सारस्वतस्यां पारि वीरविक्षेप सामोदेः।
विक्रमो विकल्पं सुमृतस्यं विष्णुकं च विचित्रं।
प्रायों तीतवं मानं चुम्बितं तत्र दापित्वं।
अच्छेन्द्रः प्रात्साक्ष्यं शिशिरैवृक्षपुष्पान्तः।
सूण्डोपवर्यं गुरुं क्षिप्यलयं गतभयेः।
हृद्यक्षोऽपि शाक्षिको दयानेत।
21. **Vaidyanātha Vati.**

वैद्यनाथ वाति।

पथा विकटे दुःख विसर्ग कानकनाथ।
धानकनीरसच्छलोकिकायामसः कुंत।
युज्ञिकोदयुक्तादिप्राक्षविनाशीय।
क्रिमि-क्रुङ्ग-नावकक्षु पीड़ावं निःस्मिः च।
युज्ञी विक्रमद्वारे वैद्यनाथेन भविष्टा॥

22. **Jogēśvara Rasa.**

जोगेश्वर रसः।

पृथक गन्धक लौह नागापिष्ठ वराटकाः।
तामक मद्धमपिष्ठ व्योमक वस्मीकं।
युज्ञायमद्धपुरुष विक्रव्यानाणयेन।
रेतुकामलवेद विपंचिद्वस्मीव च।
एतत्त्व विस्मिः भाग्य सदृश गोपः प्रस्थतः।
भावास तच दानवा धारीकलर्सन ।
माना वषाकतुः कृं वृद्धिकर्मी क्रिमित्वा।
प्रवीर वरुणवस प्यन्दिः मूर्तिक्रियाः।
प्रव दीप्ति मद्धातुरसास्मीसि च भगवः॥
धीरिज्योगीनाम मद्धांद्रिण मातिषः॥

23. **Mahā Mṛtyunjaya Rasa.**

महामृत्युञ्जय रसः।

रसमंगलीहार्व कुण्ठीचुर्णासाः।
स्वास्थ्य वषाटेस वायुपीव विक्रमकः।


24. **Vajraksāra.**

25. **Candraṇana Rasa.**
26. Vāla Rasa.

चावरसः

पल्लुं मुखस्थ मुखकस्थ पल्लुं तथा।
सुवर्णमाचिकसापि मागाद्ध संप्रकाशितः।
ततः कण्जलिकां कला कृष्णपानसः ह्यः।
कृष्णराजस्य भुक्तं निगुणं ज्ञा। खरसेन च।
यथे शेषाये पावे कृष्णदवेण महेंद्रेण्।
राजिकासहस्रोऽव वटिकां कारतीर्ष्ट्रः।
एकौ च वटिकां खाद्यरागपमादतवः।
भवन विद्याभूतं ज्वरेऽव सुदर्शनं।
पिछरसर्व कामश्च यूलं सर्वभवनतः।
शिरस्यास्य शिवेन परिक्रियितः।

27. Śrī Mānmatha Rasa.

श्रीमालसः

रघुगमकोट्यायांश्च कथपिनं सुमोहिष्ठः।
भवं निष्ठ्रकं द्वादशं पलासं सुनिष्ठ्रः।
कपीरुं शापकं द्वात्रवकश्च कोल्लकब्रिः।
ताध्रं कोलाकोंता ततं निष्ठ्रमारिः चिपेन्।
वैदिकं कस्मु दुर्जितं हस्यदर्शकवीजजकं।
बिदारी मतमुलीं च घुरींचं वला तथा।
सम्मार्गविवला चैव आतीकोपकक्षं तथा।
सबंक बिदारीं चैव तस्मां यमालिका।
एतेयां चूर्णमालाय प्रतिपद्य शाणकथिनां।
गुळ्याद्वित भीष्मं कौशिकं भंगे। पिविदु।
स्मृति वश्य परं खरोंथों विवलक्षिताचारिनः।
न तथा विशेषतः विज्ञानीयधारास्य सिवनात्।
न च युक्तचार्य साविति न वश्यः ज्ञातां प्रजेति।
कामकांडीय भवेन्द्रसाहः पोड़कुशधर्मः।
रसायनवरी वल्ली वाजीकरण-उत्तमः।
रसः श्रीमान्यो नाम संहितेन प्रकाशितः॥

28. VASANTATILAKA RASA.

वसन्ततिलकाकोरसः।

इश्वरस्वरकल्लः घनं विगुप्तं लीलासयः पारदः।
श्लोको नियतानं वर्णभयक्षेत्रीकृतं सहं चेतृ।
सुजातिब्रह्मस्य रसेन समता गोष्टरावस्यष्ठा।
सब्रि वन्यकरीणसुहृदं तगानं पचेन्त समाह।
कसुरीकर्महरस्वः तरसः पथातु सुचिं भेंगेँ।
काष्ठास-शिष्यावाचलफळसः पाणीनवादीमचरेत्।
श्लोकिसम्रां विषादिदर्शयों सेषं सत्य विम्बार्ती।
हरिदार्द्धरी द्वायदिशामणी वत्तों वल्लोवंडः।
शोषः पुष्पिकरी वसन्ततिलकं विभक्तवेनौदितः॥

29. MAKARADHVAYA.

सकरक्षजः।

सचन्तः भावी वर्णः सीरिकां काण्डलीकरं।
जातीक्षेपणं हथ्यं काश्चं रसमिद्वौरू।
प्रवाहं कश्चरी चन्द्रमधोकस्त्रभामिकः।
सचन्तसदूरति भगाधालवण: कल्याणे:॥
30. MAHĀ NILAKANTHA RASA.

31. JĀRANA AND BHAKṢĀṆA OF MICA AND MERCURY.
संबंधायेन जाति प्राप्यते रसजारणा।
तत्त्रताती प्राप्यमेव खाबिनान्मुक्तिलक्षणः
नीतिशाबिनां दृश्वः आपातत् साधकः तु।
स्ववस्तिक्षिका दृश्व रसिन्द्रो लिभुच्छिते॥
नहैं वनस्पतेऽव राशः प्रुःभिधीयते॥
वर्षभिनानं वज्रेऽव आरणी धार्यते रसः॥
तावधर्मशस्त्राशी शिवलीके महीयते॥
दिनस्विकं रसिन्द्राः यो ददाति हुँतायम्॥
द्रवलव तत्र पुष्पार्जु कुंदर्ग्रन्द्र न लिभ्यते॥४॥

अध्य याम्मतादिविधि:॥

विभाषायवश्रमेणमंगले।
वाच्याली सुरात्फलसम्पदार्थ॥
वेवायुसुदार्थ श्रावणां।
कवीव्यलोकि सिद्धियमण्डित।॥

श्रवणमूलं जीर्णं तु युज्याख्युग्याविधिकः॥
बहुरुपं गम्यं जीर्णं रक्षी महीति रोगाना॥
तुल्यं तु गम्यं जीर्णं युज्याख्युग्यां रशः॥
बिगुर्गलं गम्यं जीर्णं संभृतकुटक्ष: पर:॥
बिगुर्गलं गम्यं जीर्णं संज्ञायिनाविनामः॥
तत्रुपलं तत्र जीर्णं वलीपितिनाथाणः॥
गम्यं गुर्गलं जीर्णं चंदे ब्रह्मरी रक्षः॥
बहुरुपं गम्यं जीर्णं सम्भृतिग्नारी रशः॥
अभायमलुव्याचिनं द्रवः नीतीरवं: साधः॥
गम्यं जीर्णं रक्षायको गयकम्। लोकस्य: रक्षः॥
तत्राश्चाच्चतुष्णी व्योमस्य जीर्णं तु तत्त्रस्वं।
तावधर्मशस्त्राश्चलिनी जीर्णं गुरुबाधच:॥
आङ्किजीर्णं सङ्कष्कः कुंडर्ग्रन्द्रमादयकः॥
अज्ञादिजीर्णमूलं साधानं वेषितं शमः। खर्ये॥
32. Cūrṇarāja.

-चूर्णराजः ।
चूर्णराजशालयं चारयं सर्व नम्रः सभितः ।

महात्मापनकाराय दुर्याङ्गारिवर्यं धूमम् ॥

स्वागायति भेदं श्रवणं पश्चादि तद्वा वुषः ।

प्रवतति चलताराय भिया वैद्यं नाहे धूमम् ॥

प्रचरणप्रणाराय कुरायास्यावतिहि: ॥

वर्णोत्प्रेमिष्य भिया गुणविविहारः ॥

33. Candraprabha Guṇikā.

चन्द्रप्रभागुणिका ।

वनिरिपुद्यन्तीविविक्षाप्रदबन्ध्वस्वरूपिनिष्ठम् ।

गामपिशुल्कुमं स्नातं संहस्तवर्म मातिक्षेव ॥

लवणचारविविहारकुलकूलवहकातिविहा: ।

कषोमिकान्येव समानं कुशातुर्

पलावकं चायमातोक्षुप्रकाशः ॥

निस्थतशुद्धं दुर्गम धीमानः

पलावतं लोहरचारवः ॥

मित्रतात्वं पलस्त वांश्य

निकुञ्जकुञ्जविसुरनिविर्याम् ॥

चन्द्रप्रभागुणिका प्रयोगः

अमांको निर्णयम् शब्दः ॥

भगवद्यं पाषुप्रकारकालयः

निर्णयकः: कुक्तं च दीपम् ॥

हर्षायानं पिशकपाणिलोकान्

नायोऽति मर्यादति प्रक्षणं च ।

वद्यावदेतु विद्धिराजमस्य

सदे भगवान् प्रवलं च योगः ॥

¹ This formula is the same as the formula No. 38, Śāṅkara Lauha, described in page 64:
शिवं चाष्मरसूतज्ञः
श्रुक्रवाहिष्ठयुद्धरथं सः।
भलक्ष पूज्यं सत्तं प्रयोज्या
ताकातुपां लब्धमशुपां॥
शालिरसो जाङ्गऽपाः सा
पवित्रश्च श्रीतानातुपांम्
वलिन नागसतसी जविन
हड्डा सुपर्णः गयसी वराहः॥
श्रुक्षदीपानु निहलवटो
प्रभाभानि पिशाचिमु॥
वलीपपिदातिचूरुऽ
हड़ोपि तथायति॥
न पाणभोजो परिश्राव्यमिनि
न श्रीतवातात्परमेव्यु॥
श्रमं समभायो लत्त्रसादि
नागागुडीवन्धसा प्रखादात॥
अत्तमात्तिकः लध्मात्थातिकः
युगान्ध्र विष्णु संभाभः॥
तेन श्रववीर्यविके यव्वार
सर्जिकाचारी फूर्तदायकासित्र॥
किच दशसूक्षमते चानुवर्णेः चानोऽपशादिरहिति निरवकर्यगृहः श्रीचित्ताबोधः
वेदान्तं विश्वास्य प्रश्नधाराये विश्वो विश्वं पिन्धतगृहेः पलायस॥
शिवार्थान्विति पलायस॥ निकुम्भोदी, कुमालिक्षता, एतिः: प्रवेकं पलायस॥
हायापण्डटी काठे॥

34. रासा सार्दुला।

dशशाक्षीः।

विद्वःपुर्वतीनिष्ठु रस समर्पणे भवं विकटता
विद्वान्यो क्लास्व समयक्षेत्राक्षरः॥
35. Sī Kāmeśvara Modaka.

Vrīkṣabhūtahānaḥ

Sāmyakṣaritamāthyaṃ kārapīṇāṃ kūrakṣaṃbhātanaḥ.
Vṛddhīṣīṣaḥ eva bhadraḥsūtraḥ gopuraṃkṛṣeṣuṃ.
Rābīkṣaṃdrṣavtarī lalagata saṁyaktiṇa dhāmanyaṃ.
Vṛndānagala balā mahātikā vālīpāṃ dhāmanyaṃ.
Bhāgīkārīrteṣvīṃ vikṣebuṃ jīrhaṃvī vikṣeṣaṃ.
Bātātāmugārṇa vaktānāhāra nājāhātri vaṃsāṃ.
Vrīṣṇi mahāśaṃkārīṃvadāṃ śoḍhvāṃ kṛtātītāt.

Cū ṅaṅgīrṣeṣeṣaḥ ṛṣita vikṛṣaṃtā mahāvṛkṣāḥ: pīḍhitam.
Kṣaṣṭhī rākṣikā vahāmbha viṣya sa Ti saṃbhādā.
Pṛtwi vīrāyante muhīṣeṣakāri saṃbhādyaṃ karṇaṃ.
Vāmākṣaṇaṃ: sukhātimukhaṃ prādhanaṅkārakā:
Vṛīṣṇi vṛīṣṭiṣaḥ vācbhīṣhakāro janāyāt svayamṣayam.
Kāmabhāsmahāśaktisvarāsanaṃ māndapīṃviddhīpaṃ:
Druṣṭānyātīṃvaśeṣeṣeṣvāṃvāṣaṃbhivalambhān.

Vriṣaṅkārī vāčbīṣhakārīva vālasāmakā:
Dhyāṇamurtī mahābhārataḥsaptāṃva nātāṅkāvatātāt.

Ahām evaḥ vikṛṣeṣeṣaḥ vālāprāṇiṃ kāmāṣeṣīrī kāṃsārvatāt.

Viśeṣāṃ viśeṣeṣaṃ viśeṣāṃ viśeṣeṣeṣaṃ: Sīvāmāvadīnaṃ.
36. Śiva Guṇḍīka.

शिव गुण्डिका।

कालं तु रविताप्योऽक्षयंकर्म शिलास्मुमवरसस।
विषालास्मुस्यसूयसं वाच्य यत्सं पुनः श्रवणम्॥
द्रःस्मुलस्मु गुण्डिका रसि वलनायथा पतिलस्य ॥
सम्भकरस्मूलमित्रे वाच्य वाच्य भवयथं क्रमम:॥
एकाद्वी च चैरिः तु तत्त्व पुनाभवे यथा कशम्॥
समाद्वं महाय सतू काचवेशं यथालम्भम्॥
काकीक्षी हे सौरे विद्यार्थीय गतावरी द्रासा।
क्राक्षुष्ण्यं भूपीरामालुक्षितिका जौरण्डे ग्रुण्डविच।॥
राष्ट्राकपितविकापकान्तमहरसालिकन्तर्चव्यायः॥
कटुका सम्रती पाठे तानि पञ्चामीकानि कामांचिन्॥
अवृद्धि साधितानि र्वहिम पादहिष्कितेन मथानिन्॥
सिरियावण्यं भक्तिस्मु श्लोकं पल्लमि द्रम पठः॥
विषालास्मु विषार्थाचिकाक्षुकमु विषालास्मु निरितः॥
चूचम्य पल्ल विद्यायात्मालीपल्लमि चतारिः॥
प्रक्ष्णम् सितापितालिचतारिः द्रमयं माचिकमाधिः॥
तिक्तलस्य शिरसं च वार्तपितालिनम् पथानाम्॥
लक्ष्मीरिपीवल्व नादार्लानं सिन्ययिला तु ॥
सिरिलास्य पौडःस्यािदुःखिका। काय्याः सातसमासः॥
ता: यत्स्य नवकुम्भी जातीतपीस्विधानिने स्थायम:॥
ताभामेका काली मल्ला पातापि वा सतस्मू ॥
चौरकादित्वदरसः: सुरायणं मधु वि विश्वसतौवनि
अलीनानि तास्मुगुप्ति माप्रसत्तः॥
जीवों लघुपथंजागरणीन्तर्वृद्धमिखः स्वतः॥
सतासं याताद्वपरं भवेत् सल्ल सामासम्॥
HISTORY OF INDIAN MEDICINE

सुखापि भिन्निवेष्य यहाँहि नानाशंस संविधित ।
विज्ञापनाद्रि प्रति लक्ष्मण सुकुमारेष्व: कालिनिबियि ॥
योजन ब्रह्माध्यक्ष इलामा जात्योहिति मवलम्
वहुवार्त्तकेशि गान्द्रि ब्राह्माण्डायावारल।
ज्ञायिनयुक्तवार्तेशि: पाणियपार्वश्रीरोगान्।
व्राह्मणपीयोजितसकारासायावारसारि
जार् तिवं वर्तमं वर्णहि लोकं सति नमदी चोषम्।
उन्मादायकारि वदनाचिंतिरं गान्द्रि समर्थः
भृनासत्सागरं सामस्यं कामलार्धिनां हां
यमदनुऽदाति विद्रहसमन्दरं रत्नपिठतः
शिविताभृतिमितिक्रिया खेदसाथ धीपदेश चिन्हि।
दंपिनां श्रीमधुकरं वर्णप्रकारारि
वनेश्वरियोगान् विक्रयाधिनां भृतिकावलकां भावान्
पायसिराय चैंतं श्रवेदलुङ्किता शिवदा नामः

वष्णु हथा चन्द्रा कालिवः सैत्राजातकरि कैचम्।
ददानुपवहितां अश्म विवारि सूक्ष्म्सा च
श्रीमातू प्रकाशिव धूर्तिविडवलावहितं तुसमवरि:।
पुष्पोति सत्विजीविद्वय्यातिवोखलस्वप्तिः।
चलीमितिरोगरोशो जीवेक्षरति भवरचरं पुष्पः।
संविद्धार्धिनां भ्रतान चालितः
शर्मामयति जाहि श्रीमं सूक्ष्मावसदां रसायनराक्षसम्।
सत् सूक्ष्मावसदां प्रजाधर: सुखायि धिताय नष्टा: सैत्रयुप शिवाजाववी
शिवामुद्रिकं रसायनभुजा गिरींगेन गणपति।

शिववधनविनिवणि यमानाग्रास्य श्वाकुमित्वम् गुणिका॥
शेषशिवालोकं श्वामुद्रिकीवर्मम्।
37. **Kṛavyāḍa Rasa.**

**Kāvyādṛśa:**

चिपलो गमनं घृं द्वाराधिनः विनिचिन्तितः
पारसं पवमाणेन वतमालायसि पुनः
तेन माणिनं संमिश्रया पचासुलद्विचलितः
ततो विचुव्यूः षणधिनं निचिन्तयावस्यपावसि
चुंयां निविडः षणधिनं छायावेगुद्वासानलम
प्रवीणां रसं सम्पकः जमीरसः प्रजोज्येतः
संचृतां पक्षवौलोऽवः कथवे: साखवेतसे:
भावना: खलु दातव्यः पक्षाश्च प्रभितासः
बहुर्वष्टान्यभूमिः तुषेन संके बद्वितः
तदहं कपालवर्ण संबद्धत्वं सरोचकम
c.
समाधा भावितुः प्रभात चतुर्कार्रावर्णः
तत: संशोध्य संपियः कुर्यायाः जुधेरे चिपितः
अन्यं गुह्मानसानि गुह्मोघानातीकः
भविष्या कपियांगनं चतुर्वज्ञितं रचम
परम्परांसहितं परिविधताद्वानं
चित्रं तकीर्तेणे सुतं जार्ते दीपरं पुनः
रस: कृष्णदानामसं गोक्षें महानकेवः
सिम्भचारीषिपावकः वहमांसपिय्राय च
dिशलापांसमाधियाः भृतानवन्द्योगिना
कुष्कीष्किन्युसुमनं पवर्न दूराद्योप्पायोऽर्जनम
c.
तुषाकुर्मनिविचरं गदसरं गुलामित्रसुलावर्धम
c.
गुद्मालीविकासं वल्लवुन्जः विपश्चसंस्तं सनम
c.
नातप्रज्ञमयीन्द्रापः कपिदनामा रसः

1 This formula is ascribed to Manthāna Bhairava, one of the noted Indian alchemists. It is wrongly referred to Śiva.
38. Sañkara Lauha.

शक्त्रपञ्चीतं लीलम् ।

प्रयोग शक्त्रं कर्त्य दशकयामि सज्जरनम् ।
वैविपहितम्यमबिच्छिन्नारदीशुधियेवबलं ॥
सुखीपावेन हे नाथ ! शक्त्रचारणिकमिष्ठा ।
विनित्सुतामस्यं नृष्णं कार्यारुकमलिति ॥
सारवस्य च: गुला नराणा । द्वितकायतः ।
श्रेष्ठसा नायं नेिहौ सेवय शक्त्रोज्ज्वलतः ॥
पाराश्व दशकलोकानादायनवतं भमसं ।
कलाम निर्मोलसादी तु कुन्या सादिपेतं च ॥
पुरुसमुलक्कनं न विनित्रक्षुड़ुलितं च ॥

"जुल्ली" सन्मिलाम् । "सचिवं" सुवर्णामापिकम् ।

"पुषुं" पदवार प्रति जीवम् । "रस" पारदः ।
बश्कीपित्यम विविधतः साराराजिरच निच्छेदितः ॥
व्यासा च तस्म रोज्या दितिलाय रसविन च । "सारः" कांडः ॥

तस्य विख्याय गतिं श्रुत्सनाह समुक्षितयेतः ।
चित्तलाय रसे पूर्णे तदनुभुते सममिनि ॥
न समक्षु गामितं यथै लेनेव विधिः प्रमः ।
भासे निविष्यायेशस्मृतिः राजप्रकारसि ॥
धृश्रीं न धर्मं तत्त्र पाचं सुभोधिपि पृथक-वत् ॥
भारास्त्र धर्मं यथा तत्त् व्यायममेऽहमस्य ॥
ततः: संग्रह विविधवाचर्यो:भाजने ।
कीर्ति पद कथा यस्लाविवधा राजसूचितम् ॥
कला लोष्ये पाले विविषिकालिद्रवम् ॥
रसे। पुष्करं कलां से प्रचंद मोनायिना ॥
पुष्टि कलाहो दयां युधमिभिन्नानान्तः ॥
चित्तलायेत्व ज्ञाताम शेषराजस्य युष्मान् ॥
मानकद्रक्म महात्म वज्रीन शुरुपहुँ च ।

dिशिकान्तपलामेश्वर कुलिःश्वर ताम्रव पलम् ॥

"भंवः" सुकृत्रिया। "केशराजः" केशराम द्रति ।

पुटे पुटे चूर्णपिल। जोहातः गोंडःशिक पलम् ।

तमारस्व विज्ञायाम पलिमार्मिकसाहरेनुः ।

मेषभागाश्विये तु रसी तथा: पाण्डः गुधः ॥

चटी पलानि दस्ता च सार्य्यकृ लोहाराजनि ।

ता: ता लोहाराजा तु चालविद्धिष्वित्तैःकम् ॥

ततः: पाण्डविधानकर्म देवस्तोत्रस्त सार्य्यः क।

शत्रुःविद्धिर्मित्र शत्रुःकारात् पाण्डवाधितः ॥

चाराभे वषिधानजः: करारसंकलकः क।

भारेः चतुरेशेऽविलक्ष्यायकासाहार् ।

भारेः सार्य्येऽविलक्ष्यायकासाहार् ।

वाणिज्जाप्रद्योग्या वथापिववां खाल्कैः स।

वर्मानानुपानच गत्वोरितम संहवस्मः ।

गव्यामवे लण्डःभाषाय विगम्याविद्विभोजनम् ॥

स्वयं श्वेत्रक्रिय भस्मकर्क नरोशाति ।

श्लिष्टि वाचे तथा: पिपः भालाविविषम्यवर् ।

चतुर्विद्यासुधुरूपाय निदर्शसरोवरकम् ।

मुखलपित्यासुधुरूपाय निदर्शसरोवरकम् ।

मुखल परिज्ञायाम प्रसीमववाहुकम् ।

थथथं विद्रहसां दुःखमानिविशेषतः ।

वलकूळःहर्षाश्व कालंदेश सरोवरनम् ।

शरीरविन्धवकर्मार्यं नुषितवेदन् ।

चाबुःक्रमे श्रीरक्रिय वलवलेरसं गम्यम् ॥

स्वतिःकुञ्जस्य पवित्रमनन्तरतां वा पवित्रमनन्तरम् ।

दुर्मारारूपं नामा हस्ते वारसुक्षमः ॥

श्लिष्टार्धांशै दशानि यथा तूलच वज्ञयाः ।
39. **Candraprabhā Guṭikā.**

चन्द्रप्रभागुटिका।

क्विमितिः पुज्ञान्योषिणिं गलं वर्तते वनमुनिमः।
सामवीसुः सुसरः शारी वर्षा धातुमाणिकश्रेष्ठ।
वस्त्रार्थनिइश्युकु लसुष्कदर्जनासहायतिवेदः।
कर्मांसिद्धान्यं समानं कुर्यात् पलावक्रायसमजतः प्रवदायत्।
निःपरामहस्य पुरुषः धीमान् पवायं चैव वर्षनते।
स्वतान्तुकः पलावत् वा साता निक्रमं कुम्भ विसुलिबियुजः।
प्रथक्षुणं चूर्णस्वर्पवेद चन्द्रसंध्यं गिरिका विविद्या।
सतानिसारायैव्रैविकारभार्वि निन्दतेन विभूषे।
भगविराजः याङलपालायुहोगाणः निनेश्वरः।
महायात्रात् पितुवपालनिलिपियोऽनदीत यत् तर्कः वर्षे।
चतुर्भयं भस्मं याणारीश्च मद्ये ग्रामस्य व्रतस्यां प्रस्थाय।
युक्तं चायसरोपवकः स्युप्रवाहवेषु युतारं च।
श्रणू सबधसदृशं कोटासः प्रसादश्रण सश्रण।
न पालिन्यं परिवर्तेकं नायस्तीताताधारमेत सेषाः।
भक्षण यूँकः सतानं प्रस्थाय तकासात्यायां संस्क्षपा दुः।
एकारीशी आक्षोषरसी या पवोधया शैवज्ञानापानस्।
श्रणूशास्त्रितान्यस्योऽश्रणमेत नृस्मायायापि विंशति।
बलिपितानन्तरकी बुधीकपि षड़यास्थे।
मिहृजात्मकः सुशुचिकाश्चिकाश्च धार्मिकेषु भवेदसहस्तः।
काश्चल्लापवन्नेकसः च चूर्णेऽर्तं निन्दतमाः।
क्विमितिः पदान्तन्यन्तरशुमारधनापथितायुष्येभः।

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1 This formula is the same as the formula No. 33, Candraprabha Guṭikā, p. 58.
40. **Maha Bhallataka Avaleha.**

शिब्धीपाल्ल्या कर्त्ते लाभनी विवला घरं।
पंपंतेवस्य जानलयाबाल्ल्यादिरजनकने।
पाठाग्ल्लकीशैलमार्गियावासवामार्गियाविनम्नजनकने।
शांतिराजस्य सूर्याविनेैंद्रयवानने।
कबङ्कुराल्लब्दात्रिकापीतरजङ्काल्ल्याल्ल।
कश्याबल्लसमाह तथेवतीतोऽवल्लम।
शिर्वा लाईलिराल्लाकल्लमाल्लुपणर्वा।
दन्तीयजकसारे शुकराजे कुरास्तकम्।
बप्नरतधा शाक्तोत्वं वृद्धयो वृक्ष।
गंगाय्याला सबलांनि जलदोषि पावेच्यांऽः।
शत्मांशोऽश्रीपुतु कथायमवस्तार्तः।
विखलावारसा पूर्ण भागधारणे हटूः।
भागात्मकसङ्ख्याणि खिला तु चार्मश्रीमार्ग।
पिश्चेस्ताश्रियों तत्तुक्षाल्ल्यावस्तार्तः।
घुर्जः शतिसंक्षेप दलां वीर्यात्मक्षेपमेः।
विकटविवला सुश्रु विडङ्ग विषकं तथा।
समवं बन्दनं कालं दीयकं च पतं प्रथकृ।
चौगृंचाये चिकित्से तव चात्मासां पतं पलम्।
महाभाषाको छोट महाधामिन भविष्यतः।
पाणिनां जितकार्तेन जयेश्वीन्त्र प्रवृत्तिः।
भिवसीब्धरं दश्त्यपहस्मानुकामनस्।
पुष्करिकं सचत्त्रायं विल्लोत्तरं रत्नमखलम्।
क्राकुपालकं कर्तं पामानचं विपादिकम्।
वातारं वषाणिः पाण्डुर्गोष्णानुकंसीनि।
राजस्मृद्धावं कार्यं वरसं भगवद्धर्मः।
सदन्धश्वेति पञ्चितमामसां सुद्दारम्।
रसाला

रसाला

सह गुड़ तथा गर्म निम्ने प्रजातिम् जिवावितामानिताकामिताम्।
एतह समी कमत महास्वताकौ रामायण सेविती वस्त्रः॥
गर्म विष्कृतसागरः विष्कृटाय पायसम्॥
गीतस्रथवांच यथा चितामृहुतातिवितम्॥
सुका क्रमत नीरांगिर दशदरानाव प्रवर्षपिः॥
दधिकांड़कागसकाससमु श्वस्य भन्दुःः
प्रस्त वृत्त्वमलाय इतिःः उष्णाय यापत्तम्।
तदमापचतुरथं सर्वितः यं लम्बुनात्तथा
ढला युक्तठे सनःः कारक्षकाच्यो विशालवैत्॥
विस्तृत्व यागाविकरमससस्वस्य गुरुःपीते
कपुरेर्ण सुगमिसं तदविंद्र संडीय धारय्येति॥
क्रजावम सकरेर्ण संधिता च या रसाला खायम्।
भूकम्पक्षयादीपिनी सुखारी कालनिं निम्ब प्रया॥

42. Simhanāda Guggulu.

सिमहानादगुग्गुलः॥

पालथा कालाध्व विशालाया सुमातिः तमः॥
वीमबिकपकारं कौशिकास कर्माध्य परलं तथा॥
कुड़कु विषयात्ता सह मादयम वर्तः॥
पापयेत पाकविवेच्या पाति लोकमयि इति॥
43. **Formula to Cure Śvitra.**

शीतजयमीलूल' पिछ' पीलख स्नायुसेवा।
शिरं निभष्मा नियतं रविवरि स्वदनायाजा।

44. **Kusumbhāḍya Taila.**

कुसुमभाव’ तेलम्।
कुसम्बकुलोमीलिकारकचन्दने।
हिक्यसारसरसुङ्गोचरीबालङ्कुः।
सूर्याःशलारोलचामधुकृष्ण वनः।
चतुर्वृक्षेण पवहः पवेशेलाञ्जकु भियक्।
चरितं कर्ण गुलं च गिर;यलं च दारस्वम्।
राजस्रीं वालरक्षं च पचाचारं व्यपोष्टिः।
तदस्युषु पानियु नस्के च कर्णपुर्लेखे।
शब्भों च मिरोरोगं तेलं वियोजाध्यवम्।
पापियांसददेरकु गुदयोनिलावसु च।
स्विराजोत्स्विः श्रीं देवदेवेन पुश्चितम्।
45. Vrihat Siva Guṭikā.

हस्तिक्षििस्टिका

काशि रजितामलो रुषांसे शिष्यातप्रस्थरम्।

विद्यार्चसङ्कुशं वार्ष विहृतं पुनः ग्रंथम्।।

दशस्मूलः गुडुच्चा रसं चंडायाच्छा पटोलः।।

मधुकरसि गीत्तुति प्रहरं भावेश्वरसम प्रकाशम्।।

चौरिर्वा तव तपचरी भाविप्न्यावन पुनः ग्रंथम्।।

सतािं भाव्य खानकायनीप्य यथासामानम्।।

कातिक्षे के शेषे विदिरि गुणं तवार्दी द्राष्टा।।

वर्णयुगितस्य वीरासुण्डिकितात्मकारांगाबन्धुया।।

राजस्वरचितरचवम् तत्वाद्विभावकाचनिग्रामयावदः।।

कदंका मयं पात्र चैंति पल्लाचनिक काव्य्योः।।

भ्रमोफसारितानं रक्षे पादां ज्ञेन सामान।।

मिरिजचैव भावितयुगार्थानिच स्तरं च।।

विपलं प्रस्थ, विवधालीमागिकाकांटस्यांसर्त्तिवानम्।।

चूर्णमस्ति विदायं तालीसप्तानिच चलारि।।

श्रीस्वमितायलानि तु चलारि ज्वतः सांचिकादोऽि।।

निलालसस्तिरं विपलं चृत्तिपञ्च सप्तानि यथ पञ्चानाम्।।

लक्ष्मीदीनकुलोबालानं च मन्त्रयियह।।

मिरिजस्य श्रीस्वमितायलानि: कार्यांशितकसमाधस्याः।।

तत: प्राप्तं: नवश्री जतिपुष्ट्याधिविग्निते स्वाया:।

तासामिकं काशि ततं धार्यो वि सतवाम्।।

चीरस्वरदाधिकवतः सृजावय धिमकरविशिष्टवाय।।

प्राकृतमाथ ताञ्चास्माति वा प्रक्ष्णली।।

तार्पी सङ्क्ष्यात्मा: विनमृण्यांवर्गस्यचतुर्बंधनं।।

कत्तािं मोतासंवेदमः परं मनुस्कारसामालयम्।।

1 This formula is the same as the formula No. 36, Siva Guṭikā, p. 61.
ŚIVA

भुजादपि भवितेऽर्य यहस्य नाम हे क्रम यमश्रितः।

निषप्रदया प्रयुक्त मुखार्थेः कामिनियेऽवे।

संवणलं प्रयुक्त हर्षोऽण जातशोकिते प्रवक्ष्यः।

शब्दाधीनाम प्राणे गार्द्य यस्यार्य चाकावांसः।

व्यवधानोविमुक्तिभोजितासत्त्वमः।

ज्ञानं धिनं कुः पानं श्रीरं चरं मर्य भोजः।

स्मार्दयायार्यि बदनाधिष्ठितोर्मन्तः।

आनाधिकारसस्यदकारान्सः प्रीतिः।

गहनमाध्यप्रत्यक्षवित्वान्वितं रक्षतिः।

‘लोकार्य।’ तत्त्वोपि विद्वानं श्रीपर्वं च यमश्रितः।

द्वाराधिकारकं गतः सर्वान्ति श्रीप्रकारार्थः।

मनोभवविप्रयाविनिऩेतरसुन्दराभित्र सप्तमः।

पापज्ञाती चेओ श्रीभेदतुदिकु यवमा नामः।

वल्ला हया धनं कानिवशः श्रीप्रजाकरी चेयमः।

द्वादशमुपपवनं जयं विवाहो सुमक्ष्या च।

स्वचालकमधवधिप्रतिवृक्षी अवधार्यी हंसा रीरः।

मुख्योपलोक्योपतिस्वास्थ्यमकारान्सपदिष्टं।

बलीपदितार्किताणि जीववेश्चरं शतद्रुः पुरुषः।

संवणलं योगमात्र, धार्मिक शतानि चलारि।

सर्वास्तिकाणि सुविनि सत्त्वमक्ष्या रसायनविक्रमम्।

प्रयुगितेऽपि प्रविष्ट्रजवः गिरिर्यो गगनतवः।

46. Vyoṣādyā Guṭikā.

वीषाय गुटिका।

वीष मध्यविण् पत्थर विचतां जीर्णकययम्।

अनीदां यवांचं च मध्यां श्रीवस्तव्या ज्ञम्।

स्ववर्णदियं चारं समस्मागागि चूः निन्दित।

गाथायमेति द्रव्यां तावदशा गुणुः लुः शरसम्।

47. *Vṛiḥat Sāyambhuva Guggulu.*

कह्मकायुष्यवंगमुः।

अभज्ञ गाणिशोऽगमनयोऽर्गयात्रि पली पली।
पलब्रह्म च तापुदाका कृत्रिम परपाक।
सिवाँगुजत तुषाल्ल सत्यः पलायन दश गुणुऽह।
सर्वसमक कथ संखुऽ गुटिका कारवेशुः।
शाखः कथः कथे वा ततः स्थायमभवः।
बातराज च कुणातिः विविधानां विविधानि च।
भग्नराजुः उदधानिमांस वधौगदाम।
बलिजानकाह कर्मोऽध्य पञ्चपदस्यां च।
शीतोष्णारम्भासंहरणे वेश्यः च विविधः।
सादीवाचः सामाल ग्राहाविद्विहसंहदाम।
हथोः वस्त्र धाम्या क्षेत्रीया संधारदेवधनः।
आयुर्वेदार्थः पुत्रस्यामायदाः।
साधनानुपन्नाकाशी गम्पुरुषिकः परम।
कालपालिन् विद्यारती माता खायं नुक्सी भुविः।

48. *Kumaryāśava.*

कुमारयासः।

द्रोष्मान्तं कुमारयासः रक्तं मांशे निधारपनेत।
तुलार्यं दमसमुः तु तद्यथै चौकरी जाटा।
तद्यथ तथायाः च विनवाह च परिचिपेत।
प्रसारपालनं ग्रेवा तद्वर्तभया तथा।
49. \textit{Nālikeraśava}.

\begin{quote}
नालिकेरासवः च
nālikērāsavaḥ
deśhāpiśchāvayā pradāpyai
deśhāpiśchāvayā pradāpyai
\end{quote}
50. **Vṛhat Sahacara Taila.**

हर्षकाकरातप्यगुणस्य भाष्यमेव

कृष्णश्रीरक ग्नाथविद्याय चाँदाध्येयहहे

श्रीधाराविद्यालक्षणमार्गविद्याय रावणमेव

संग्रहोविद्यालक्षणसंग्रहोविद्याय रावणमेव

श्रीमान्द्रस्वामिः श्रीनारायणां प्रकटविद्याय

प्रकटविद्याय श्रीतुल्लाकेष्वाद्विद्याय रावणमेव

रामायणविद्याय रामायणविद्याय रावणमेव

श्रीमान्द्रस्वामिः श्रीनारायणां प्रकटविद्याय

प्रकटविद्याय श्रीमान्द्रस्वामिः श्रीनारायणां प्रकटविद्याय

श्रीमान्द्रस्वामिः श्रीनारायणां प्रकटविद्याय

श्रीमान्द्रस्वामिः श्रीनारायणां प्रकटविद्याय
51. Viṣṇu Gutiṅa.

विन्यागुंटिकाः

पलवं जरोतकरशिष्ठकस तथावं तु।
एकलकपसुरुवानं भमश्चाण्यपिंङ्कः कृतः॥
द्वीपं पिपलिङ्कुत् च विविष्यं च पलविनक्रमस्॥
नामकेशरचर्णं तु कर्म द्वाराधिक्षणः॥
रेणुकाधर्पनं चार्ण रस्सिन करार्णेऽव।
एकर्मद्विभ्यं सम्भारं सूचकवानं तु कार्यमित्॥
गृहवर्धं तुलं दलाद्वारं संविस्तिरहितं॥
तत्त्वं गुणितां: कला तथापुष्पिष्ठसंततयं॥
द्वायं भवयेऽव्रातः जताहारी यथावलम।
माधवन पलितं हृदयं करोदित्रि हिरितवक्॥
शुचिकिं दर्मीयं तु बलवण्यसाधानम्॥
हन्यणादश कृतानं मनं चेव महाचामान॥
श्रीहाम वयाकामी च भन्दसिन्विरोधकस्।
श्रीविं वता जातानुगम्यूङ्कक्षां भगवदम।
प्रमहान्विविषा तः हृदय तथापूर्वांशिष्ठिः गलवहम॥
परलुतविअसं हृदय सवे खाद्यरजवासम।
श्रीविन्द्रमण्डनसुबांश बिस्मान्मतम।
वर्णन गदतुज्योक्षीः वर्णन तुरुपेश्व॥
माधयन्म्भम् भवदिपिवाराहेद्वीत एव च।
जटकः साक्षालार्षन ग्राहकिण्यास्य सुप्रोचो॥
पद्यस्वाग्यानं जीविवर्ज्जीवन वर्षागतव्य।
न चाँड्र तिरिप्रसिद्धि न चाँड्रि न सेव्यं॥
वायथम् च कुवायो भोजनं च यथीष्यया॥
बिन्यानं नाम गुणिता विन्याथस्तु स्वर्णाभिषत्त।
भत्यन्ति नरा वै हुः तेषां सिद्धिः संवयः॥
52. **Kaulitikā Varti.**

कौलितिका वर्तिः

पवनि चिंतां द्राव्यं सूलत: संप्रक्षार्धं।
तत् च वृंदंगुणि राज्रिविन निधापवत॥

यदाब्रह्म कायदेव चतुर्दशभासंपतम॥

बिश्लाय वाशिवेशुक्ष्माचर्चिणं संयुतम॥

पारिक्षेत भिष्यदासवर्तेलिःसगानतम॥

भवंतु तु तस्मात् कायाः परिशोषणेऽः

कौलितिका वर्तिः सर्वनेत्रवज्ञापत॥

सर्वमिथ्यद्रेणभी सत्य प्रीतै पिनाकिना॥

53. **Sūta Bhasma.**

सूतमः

मृत्युं मुखः लवणेष्ठुभिः: चार्णितिस्यायि विभदेव॥

संवीय प्रवाहविषुः विक्रुत्तांकाष्ठघीरंसिर्वरं च सः च विभवः वै॥

रसेन सारे हि कुमारिकाया सूर्या विद्यामाहालं शोभितम॥

तथा निधायाय रक्षण गोलकं स निधित्वाचार्यसेन सब्जां।

वामसच्चिनिर्देशेन दीर्घम् पथमिर्नाभिमिट्टौदासिः

मेकापस्युषुधवराजकः: मधुपरितिकारिकाः।

कामसंधरसप्रविभक्त कारकृंरीतः समीरः अयनिकाद्रेः॥

सिन्धुवारकरसेन विसिदिः सब्जकालिः निवासस्य।

प्रतिर्तं च विभिषः हि भमेद्युयाशिवाबति कामसेन॥

कैसिनाहित्वराहिपिलकः: कामपुरुषं च रसेन सर्दिः।

जायते सिद्धस्तं मुनी वेष सुप्रसादतमवसुवंस्तं जयेत्॥

य: श्रीमुखद्रेण कैरगनिर्देशः निवेष्टियते कार्तितह वै

श्रीमेधिष्ठेन स्वद्वाण्डवत: नाशिति कृष्ण सदा।

लोके कौलितिकपरियां विवशुते वेष मन्त्रार्थहते

पानि तथा पुरा गतिद्विष निभते सर्वे विशेषनीनिति॥
54. **Gandhaka Taila Pātana.**

नम्भकारत्यपातनम् ।

काळोश्वीर्यसंयुक्तो युक्तगमशक्तिंशकम् ॥
बच्चे विसमित्वातु मन्दृच्छि संतेजकाम् ॥
विलिय वसेषिय च वरं मुलेष वेषयंत ॥
झला संदेशी वसेकायं पञ्चायथे ताम् ।
विद्वृत्त: पतले गमी विन्दु: कायभाजनः ॥
तां द्रुतिः प्रतिपेक्षे नागवल्क्यनिक्षिप्तकामः ॥
रसम् बहमित्वे तत्र दक्षास्थिय: विमर्शितवः ॥
तत्रवेव मन्तचेतत्स्मृद्धिः चापुं चंपितं ।
कामस्य दीर्घः कुमते चवपायुविनाशनम् ॥
गहनीं नायवेश्वरं गुलालिन्यायकासकम् ।
आमाजीवम प्रसतिहस्तेन च पञ्चायते ॥

गन्धकस्मि गुपान्व बलं श्च: क: श्रम: ना विना ।

55. **Vātanāśana Rasa.**

वातनाशनीति रसः ।

पुरों क्रं तापः बच्चः बच्चः
जीवी तापः तापः तु तापः च ।

जरें: कीर्ति बहसंवीरकः दि
क्रमा स्थ्यक्ष स्तब्धियं समांशम् ॥
भागे चंक्क वारेरेन्द्रिः रसीनः
वचरोः द्विते तदििकामः ॥

हुह चतुर्गुरुः तत्र वनमां
भागं चंक्क वचरेदार्जीः ॥

विषादिवं पिपलशापरित्रकः
कृष्णामूर्ताकाय अभयायियः ।

सघनी वातन्त्र वातश्च विकारान्व
हयात्त्वं भायते महर्भवेशं ॥
56. Tālakarāja Rasa.

तालकराजप्रस्त् 

ब्रजं चाम कांत तालकां धि सूतं गुणं वञ्चुनाम् सधे ब।
हीरोर चेंडङ्ग चेवं घोरं ब्रजं युमं भाममवेष कुमारं 
धनं कुर्यावतीष्ण मागानि समयं सूतं चेवं तालकां वै विभासं 
नामं चेवं तथां बेदभागं हीरोराही कर्मणीविहि धि मागी 
खलि भयं स्वभिकत विवेचीरे चाके वासरकं प्रयाऽन् 
पशुधिवेत् काचकृङ्गांनि सर्वं कृतिवरं तामर्यं श्वषाः 
वुद्रं हला पाल यामाट्युमं शीतं हला पुरवभ्रवर्दनीयम् 
एवं कुर्यावतीष्ण वाराणि सर्वं कलं जातं बीडङ्गाश्रेणि तासम् 
गुमं कुर्यावतर्जांग्रामायं सर्वं तेजस्वित्वं वेदस्य व। 
प्रत्येकं वर्षेतप्रयायहृदयं नौ जायते स्वर्गालम् 

57. Svarṇa Sindura.

स्वर्णसिंहदुर्म 

श्रावर्षं सुचवर्षं सुखं कोलसिंहितं 
भ्रमृं पल्लवं निवृत्तं घवाचियं यवसिंहितकं 
साइरं गमंकच हला कर्णिविहि ततं 
निवृकार्कुक्षाध ढांतां परिविद्यति 
तां करङ्गं दाचेवं खारिकाभिः समभति 
निकुञ्जस्मयं यं न संपुष्क हरिमयं 
बलुकायथमस्ते तां सुखं समाहित 
पचं हालं वामांस्त्र्व निवाभिते च सुनिष्क्ष्ये 
एकाली पाकबिल्य शालेश्वरं च सुरुपरे ते 
स्वर्णसिंहसिंहिततु स्वर्णीय निसुद्धं 
रत्नं देशं निस्तव्य भविषयादसतसंमय 
बलुकायथमस्ते स्मरं वभीष्ण नागम्
58. Pūrṇa Candra Rasa.

पूर्णचंद्रो रसः।

शुभराष्ट्रकीर्तिः शुभराष्ट्रकीर्तिः।


भस्मेश्वर रसः।

एकभार्म विभावणम विमानम स(रि)चार्मिनम्।

60. Śītabhanjī Rasa.

शीताभान्जी रसः।

पारम्पर्य रसकं ताले तुल्यं गच्छकटकर्षः।
61. Putraprada Rasa.

पुत्रप्रदी रवा: ।

श्रवणुलं वायुं स्वेतं मन्द्राभ्र दशं माधवि ई।
वृद्धि तृती द्रवाघि वृद्धि चोपरि ॥
तावथु दिशाः चिंपिपारायतुः कान्छितायकाम।
मन्द्राब्ध्रुन्नीरक्षण यावतेक चि जाति ॥
पुनः संख्या ते सृतं बटग्राहिष्ठिन्न्तः ॥

काकामात्र च जीवन्या रसः स्वादामयमकात् ॥

दिनं श्रीतामुक्तस्थरं दिने कं दशं माधवि ।
एवं सिक्षार्थवहि प्रययं ब्रह्मचर्यर्थाद् ॥

माधवि संघि भरती सिद्धार्थमूषियः।
विज्ञानिमानार्थसंवतारी कमांशक्ति ॥

सति सदि दिनादु पीला प्रयाद्वनसमागमः
रक्ष्यं वहं तां यथं कार्यावर्तं सतिपुत्रम्

दशं दशिरका सृतं पकाशिकरस्वतितमः

चित्रित च प्रभुया चार्येय श्रविततं परमः ॥

महिष्या दधिसागरं द्विते सृतं विसाक्षमः

भौतिकशास्त्रे राणी भवयोर्धिरिधिपुत्रम् ॥
SIVA

रसीयरसीकोडानि धानामादिविशिष्टः।

भवन्तयुतेत सत मार्गेवुर्दगतः।

पवित्रं चक्रवर्तेः च गम्यकेन समस्वितम्।

वियं कलायरं दल्ल। श्रीमणिधिमितितम।

पिलेश्वरपिपस्मायुं कुटी मात्रामाणिकयं।

व्यापी रस्मिः चूळः। श्रविधातवविधायः।

भवतिर्भव प्रदातस्य श्रीवशंसे च श्रीमिषेः।

प्रदृश्यं सुपद्धरका। सतसंभीवेन: परं।

क्रामिणं समायुक्तं: सर्ववाधिविवाहन।

नामवृक्षं विना आधिं न हृदबिवृत।

सर्वव्याधिहरो नाम पुरा हृदेश भावितः।

62. Saryvaa Vyādhiharā.

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 inmate as the 'Vāstudeva,' the god of the house. It is not killed by the Hindus but is allowed to go elsewhere, if it proves dangerous to their safety. Śiva 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 uraeus, 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 Cassalins Collection of Medals, etc. (17th century) we find a snake encircling the god.
CHAPTER II

BHĀSKARA

In the Rgveda, 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 Rgveda 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.”

And again in i. 50. 11-13: “Cure is to be prayed from the Sun”—चारीम्या भाज्यादिष्टे यां भाजनारा—Sāyaṇa. Again “Cure is to be prayed from the Sun”—चारीम्या भाज्यादिष्टे यां भाजनारा। 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 Varvasvata 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 Uttararākura and began to graze in the field.

The shadow in her turn gave birth to two sons—Sāvarna Manu and Śanaścara, 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, Śanaiscara 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:

वतात ते प्राथम शतब्दम् सुधवाय पाचुरस्य मन्तव। यत् ते मनस्त लक्षितं धार्यायं सम्भविन्यासं क्षत्र वद निन्दवा चालपन्। ।

‘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: सुधवाय चतुरस्य चतुरे दियमिति:।

‘Surya is the superintending lord of the eyes!’ and in A.V. xi. 8. 31: सुधवाय चतुरंत: प्राथम. पुरुषसं वि भिजरि॥ ‘Surya occupied the eye, and Vāta (the wind) the breath of Purusha (or man).’ See also A. V. xix. 43. 2, 3. Compare further Plato, Repub. vi. 18, where Socrates says of the eye: πάλ

Ηλιοενεστάτων γε ομια των περι τας αισθήσεις οργανῶν. 'I regard it (the eye) as of all the organs of sensation, possessing the most affinity to the sun.' Eur. Suppl. 532 f. Ὅθεν δεκαστὸν εἰς το σῶμα αὕτη τε αναγκαία, πνεῦμα μὲν πρὸς αἰθέρα, το σῶμα δὲς γῆς. '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 folgendermasen 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 laügnen, aber ’ u.s.w.’

Books:

1. Bhāskara Samhitā: 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 (Kāsyapa) 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 dušeśīkītsyaṭām, and only to be approached by penance, sacrifices and donations to the officiating priests.”

Beginning: नमः श्रीहर्षीवाय। श्रीगणेशाय। चौ नमः श्रीमहोऽय।

MSS. — 1. I. O. 2719.
3. Or. 1254 (British Museum).

Formulæ attributed to Bhāskara:—

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HISTORY OF INDIAN MEDICINE

1. Bhāskara Īvāna.

Bhāṣyaṅgīvaṃ

पिष्यली पिष्यलीमूलं भन्याक्षणाग्रेरसम्

सैभवच बिड़ढ़ैव परं तालीममेकरसम्

एवं देवशिकानुभ भागानु पञ्चशीवर्चलय च

मरिताजांज्ञि शुक्लीमातीकास्थ पलं पलम्

लवली चार्ड भारी च सामुदात् कुड़वयम्

दाड़िनास् कुड़वयौ च पली चाच्यवेलकात्

एतेवर्षीतें ज्ञातं गमावमहतीयम्

लिप्यं भाजर नाम भाजरित संविनिर्भितम्

जसतमु हितावि यात्री भायाप्रसम्

बारगुः निष्ठ्यो ततु बायापुआँ बायि च

तकलमुकुरामीर्काकाकाकायोंजितम्

आङ्कलानां मांसिन रखियु विविधियु च

मयादी ब्रह्मां शकी मन्वादीय पावकः

पश्चापि यहीदीयं कुरामयमस्वादानु

होगमामदीयां विविधानुदरक्ष्यातानु

श्रीकालमप्रोवह सापाकादीदरकिनीम्

विशीर्यः शहारादीनः रोगार्ग नानाविशेषाय

पाष्परांगं विविधाः नारान्यक्षिणयाः

Bhāskara Cūṇa.

भाजरचन्मम्

ताण्डेवपियादिन्न्वरिवविक्ष्या कर्षणीर्द्रदायः

सामुद्र विवायीर्यमयदशस्त्रं लक्ष्मी दार्शिम है:।

विश्वविद्य्यप्रक्कलर्यवैभाजारीदेन्त्याः

नुवानामार्षिनिकायवहििणाद्वत्तलपुर्धाः प्रवादे॥
BHĀSKARA

BHĀSKARA LAṆAṆA CŪṆA.¹

भास्करसम्बन्धः

पाणिवेदेः इव यस्य विवेकसम्बन्धः
पिष्यली पिष्यलीमांक्षयं करण्येश्वरनम्क्षयं
नामकारकाधिकारभाष्यस्यतथा
विशेषभाष्यभाष्यार्द्धमन्त्र प्रस्तुते कार्यविश्ववेदः
मरिच्छू जीरकं विशेषकैैयं कर्तमानसकम्
दारिद्र्यं साधुतकपं लगेणी चाईकार्यिं
वैज्ञानिकोत्ते भाष्यस्य समारकस्
एवं पीवृत्तं स्थनं लगेन्यं भास्करभ्रमस्
शास्त्रमार्कां द्वेयस्य समुत्तकस्य सर्वसंग्रहः
वातश्च पांचं भुजं सीतानं सद्युद्धयमः
अष्टादेश मात्राः कथो विद्विवेवं भगवद्यमः
शर्य मूलं शास्त्रसामालछविश्वशः हर्षकमः
भव्यं नायेमेति दौरैयोपन्य पाच्चनं परमः
साध्येन्द्रितत्वात् भास्करैशःदिते पुरा

2. UDAṆKA RASA.

चदकरिः

कोलसमासों सुमारीति
रक्तमयमृगी समाविष्टन्
ततमें संग्रहस्यान्तः
मानमनस्य तीर्थचुर्णां
सच्चिद्रय नुक्खरिकाफ़्ते
—राजकुर्म परिभाषात् वटकोशितः
भव्येरुपशुक्षणाः जयेन्
भूतिकावयादि साधु दात्स्य}

¹ For a translation of the formula, see Dutt's Materia Medica of the Hindus, pp. 86-7.
In the Rgveda 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, Harimāṇa and Harimāṇa disease or yellowness of body.
12. We transfer the yellowness of (our body) to Śuka and Śārikā birds, and to turmeric.
13. He has destroyed my diseases.

115. 1. Sun, the soul of animated and inanimated creations.
1. 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. 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 Rgveda addressed to Savitā:—

Rv. i. 22. 5: Golden-handed (हिरस्धायलिः) 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 (विश्वरूप), 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. Ahivudhnya is mentioned as a 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 Rgveda. But he stands in the second rank in the Puranas, as next to the famous triad: Bramha, Visnu and Mahesvara. 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 Indrānī, better known as Śaśi (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 Ātreyā and Bharadvāja.

ॐ श्रीमन्तो भगवान् श्रावः प्रतिपर्वियो मे कावलम् |
ॐ हस्यमौ भर्तराजसवाच्चकसुपागमसत् ॥

Caraka Saṁhita. 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 Rgveda 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." 

Indra is said to have entered into the womb of Diti and cut the fetus into seven pieces. See Rāmāyaṇa, I. xlvi.

Rāmāyaṇa. i. xlvi, 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. 

His discipies.—Indra is said to have taught the sages Bhṛgu, Aṅgirā, Atri, Vaśiṣṭha, Kaśyapa, Agastya, Pulastya,

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 Ayurveda, which he received from the Āsvins. These formulas, as taught by Indra, are called Aindriya Rasāyaṇa

* * * * * आइंद्रीय रसायन नामः प्रवचनः * * * *

वदेन्द्रसहायृव दायतदशिष्ठ: संक्रियावैति सर्वेमनुभिवः

Caraka Samhitā. VI. i, p. 323.

**Incidents of Indra's Life.**

1. **He killed Āśva Asura and helped Kutsa:** 1.11.7; 1.38.12; 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; 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 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; 8.32.2; 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 Rgiśvāna, son of Uṣīja:** 1.51.5; 1.101.2; 1.103.8; 2.14.5; 4.16.18; 6.18.8; 8.32.2; 8.49.10; 10.99.11; 10.188.3.

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; 4.16.18; 4.30.20; 6.26.3; 6.31.4; 6.43.1; 6.47.21; 7.18.20.

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), Rudhrika (2.14.5), Varei's son (2.14.6; 4.30.15), Margaya (4.16.13; 8.3.19), Tugra and Vetsu (6.26.4); Vartī Dāsa (6.47.21) and sons of Vṛćivān, 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), Ahiśu (8.32.2 and 26; 8.77.2), Aurnabhābha (8.32.26; 8.77.2), Parṇaya and Karandha (10.48.8), Nava-vāstva and Vṛhadratha (10.49.6), Nṛsadad's son (10.61.13), Visvarupa, son of Tvāṣṭā for Tritā (10.8.9) and his own father (4.18.12; Taitt. 5.6.1.3.6).

11. Killed Karanja and Parnaya for king Atithigva (Dibodāsa): 1.53.8; 6.18.18; 8.53.2.
   " Īvaṇḍya for King Rgīśvāna: 1.53.8.
   " Kṛṣṇa's pregnant wives for King Rgīśvāna: 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.
   " Āṃhā Asura for king Sudāsa: 1.63.7.
Killed Kavi, son of Gayamana for king Sudasa: 7.18.8.

" Kujabaca 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; 10.118.9.
" Vyamasa Asura: 4.18.9.
Drowned Sauta, Kawasa, 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.
" Dasadyu: 1.33.14.
" Svitras son from drowning: 1.33.15.
" Praskanna: 8.3.9.
" Atri, Vimada and Angira: 1.51.3.
" Rusam, Svaavaka and Krpa: 8.3.12; 8.4.2.
" Rumasha: 8.4.2.
" Kings Narya and Turviti of Varya Dynasty: 1.54.6.
" Kings Turvasu and Jadu: 1.54.6; 1.174.9; 4.30.17; 8.4.1; 10.49.8.
" Sage Turviti from drowning: 1.61.11.
" blind and lame Paravrga and made him see and walk: 2.13.12; 2.15.7.
" Adhigru (8.12.2); Tryasdasyu (8.36.7; 8.41.10), Dirghanakha (8.50.10).

13. Helped King Ayutta (6.18.13), Ayu (8.53.2), Usana (10.99.9), Paravratta, son of Agru (4.30.16), Turvaja (Divodasa-Saya) (1.53.10).
Gave young Vrcaasa as wife to old King Kaksivana: 1.51.13.

" riches to Kanva, (8.49.10, 8.50.10), Paktha (8.49.10), Dasavraja (8.49.10; 8.50.9) and Gosarpha (8.49.10; 8.50.10).
Gave the house of son of Anu to Trītsu, 7.18.13.
,, Parābat's riches to Šarabha 8.100.6. Placed Atithigu's son in Gungui country (10.48.8).

,, Turvasu and Jadu obedient to king Sudāsa: 7.19.8.
,, Trītsu give his all to Sudāsa, grandson of Devajana, son of Pijavana, 7.18.15.
,, Turvasa obedient to King Śrīnjaya: 6.27.7.
,, Brūvats,, Devarāts: 6.27.7.
,, Tugra and Sruadvi obedient to king Kutsa: 10.49.4.
,, Veśa obedient to King Āyu: 10.49.5.
,, Śatgrbhi 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 Ṛgveda the following hymns are addressed to Indra:

1: 8: 4.5.6. 169-170. 69.
4-5. 173-178. 72.
7-11. 11-22. 7: 18-32.
16. 36: 1 and 5. 41: 1.
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. {1-8.
121. 32-47. 104. 19-22.
129-133. 60. 24.
165. 68. 8: 1-4.
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
1.176.6
1.177.5
1.178.5

: Prayer to Indra for long life, strength and
good food.

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 (विषयतु) !

8.91: Apalā’s prayer to Indra to remedy her baldness,
etc.

10.161: Prayer to Indra to cure consumption.

Ṛgveda, X. 161 Hymn:

God—Indra. Ṛṣi—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 Niṛṛtti, 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 Vṛshapati, 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 Rgveda:

Iśvara (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 (3.81.8); Vṛtrahā (1.16.8); Maghavan (1.38.12 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); Suṣipra (1.101.10); Medhyātithi (8.1.30); Puruhuta (1.176.3; 6.23.8); Iśāna (1.75.4); Purandara (6.32.3); and Śrīga-viṣa’s son (8.17.13).

Formulæ ascribed to Indra:—

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1. Aindriya Rasāyana, No. I.

2. Aindriya Rasāyana, No. II.

4. Dāsamūlādyā Tāila.
सिरगौर्ववाचकहुक्रयरजनीयः।
मधुकरसस्मृतिहितनीला०
कलसदां समर्थस्म: पकाचौरी चतुर्गुणः।
सीमारं भवाप्यारं प्रात्यक्षवननवावः।
कद्विनौरूपतयाताजमैसंस्तिदिकान्तः। चक्रान्ु।
कृपामिरारचारि नामयथाविचारपि।
त्रैलोक्यछणुरुपं नदक्ष कवििर्योऽुरा। वालसा किरि रक्षाय विचित्रीरतिनिवकशः।
अभवन्य सर्वाराधि मोहन्यः रिपुरिस्मन।
वैष्णवार्तां। शेतं वस्तोत्रारातिसंगते।
धिश विलापभाग महायाजनी यदि रसित नर दिशि ग्रीषम।
सदनसायकजारितोरसी संवति तस्म तववपयतं महं।
ताप तस्यखवथियु अयान्तारायोगः।
अग्निकायसंयुक्तं चरीकरस्बूतमसम्।

5. Haritaki Avaleha.

चरीकरस्बूतः।

भेतीतापदि स चितियांनं भाषा।
पुष्या च भूमित्वया सहितं विपाकः।
पादिखे तस्म शरम वस्रहावतानां
पाच्यमुल्लभुक्तं शतस्य चार्यस।।
छत्तायं तव मिशिरे मधुः प्रकाशं
चलारि च बिनुचितानि पलबयं च।
वीच वदिलिहंस्निर्विष्कारकाणा।
सेनां पलं खव निग्रिह्यमुचियुः।
उस्म सकारसंपदि शोभयातितिहया।
रेकाराकं ब्रम्हपीतस्मुक्तं च।

इवादासायानसिद्धं द्वपुरवदस।
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 Parvati."


Begins :—

बालींशायास्यस्मात्: * तं समाधिः गजालम् **

* * *

भव्य श्रीपार्वतीवश्च प्रियदुर्गुरुर्मणि: **

प्रमाणे च रचिते चैव वाणीत्वमात्रम् **

नेदाग्नेण च वाणीत्वम वाणीत्वम् भिषाय ष

प्राण घन्तारितोऽहम्म तस्मान्तद्यापि यथा **

Colophon:

रति—श्रीपार्वतीवश्च कौशिक्यनिर्विकरिते वाणीत्वते निदात्योत्ते नाम मथानः परिश्रेदः **

The MS. No. 13177 contains the following Chapters :—

1 1 निदान योगः: 1 6 1 लिखायमें समासि: 1
2 1 कार्याय योगः: 1 7 1 चूषाणमें योगः: 1
3 1 प्रथापद्वा योगः: 1 8 1 चौपदासि: 1
4 1 तेंदुयोगः: 1 9 1 एद्योमः: 1
5 1 द्रुतयोगः: 1
SARASVTI.

Sarasvati, the goddess of learning in later literature, is not of very great importance in the Rgveda. She is celebrated both as a river and as a goddess (सरस्वती शति एक्ष्य नदीविष्यवतात्व निगमा भवलि। Yāska. Nir. ii. 23). Sāyāṇa also refers to the dual nature of the deity (विविधा हि सरस्वती विकट-कुंदक्षेत्रा नदीहया च). As a river see Rgveda i. 3. 12.; vi. 52. 6; 61. 2. 8. 10. 13; vii. 36. 6; 95. 1; x. 17. 10. 1.—(Vāj. S. 4. 2; Atharva Veda vi. 51. 2); 30. 12; 64. 9; 75. 5. The river Sarasvatī, which is now a narrow stream loosing 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 Sarasvati. 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 seek 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 Vadhrayaśva 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 (समं चलिः सरङ्खति).

"In Rgveda x. 131. 5 (=Vāj. S. x. 34) where the Āśvins 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 Āśvins physicians, and Sarasvatī too a physician, through speech, communicated vigour to Indra.' The Āśvins 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 Āśvins, holds a well-formed embryo in her womb.'

In the Rgveda 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, Bhārati 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 Bhārati 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 Rēis who composed the Vedic hymns.

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2 "भरत: भाद्रियः । तथा सम्बल्ली भारतिः। ताधोगियोऽकेंद्रवते। ऐ इले मूदिवेः। ऐ सरस्वति। सरीवाकः वदकं वा तदन्ति वणनंरेवः।"

Sāyaṇa: Commentary, i. 188. 8.
114 HISTORY OF INDIAN MEDICINE

Formulæ attributed to Sarasvati:

1. Sārāsvatī Ghṛta: an oleogenous medicine to cure sterility in women and seminal insufficiency in men.

चारणां च नारीणां नराणां सकरित्वां
पुत्रे सारास्वते नाम सारास्वता विनिमित्॥

End of Maṇḍukābrahmikalpa.

G.O.M.L. xxiii, No. 13184.

2. Sārāsvatī 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.

SĀRASVATI GHṛTA

सारस्वतम् घर्तम्

चारणं पयः प्रक्षरितम् बचा मिलुर्हैतक्ति
विष्कर्तको सरिचम पाठा देववन्दमस्म घर्तम्
प्रक्षरितबदयो भगा सवशनाः पलिन्नाः
पेतुसं जीव पवता घर्तप्रस्स विपाथचिन्त
सकोयागसितेष्व सतिम् सत्याङ्ग मानसः
सरस्वतवदशम् पानादिवावशायगति

The following hymns are addressed to Sarasvatī in the Rgveda

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, Bhāratī, 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 Bhāratī, Sarasvatī and Ilā for
prosperity.

ii. 1. 11: Hotrā, Bhāratī, Ilā and Sarasvatī, the slayer
of Vṛtra, are identified with Agni

3. 8: May Sarasvatī, Ilā and Bhāratī 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 Śapādikās.

32. 8: Sarasvatī is prayed for with the goddesses
Sinivālinī, Rākā, Guṅgu 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 Šunahotras.
O Goddess! grant us offspring.

18: O Sarasvatī, the source of food and water!
accept the oblations of the Grītsamadas.

iii. 4. 8: May Bhāratī, Ilā and Sarasvatī with the
Sūrasvatās 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 Pāni.  
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 Vaśiṣṭha! 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 Bhāratī, 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 Paruṣṇī (Irāvatī)! divide among yourselves the psalms uttered by me.

110. 8: May Bhāratī, 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 Sinīvālī, O Sarasvatī! hold the embryo. May Aśvins produce a foetus
RĀKĀ, SINĪVĀLĪ, GUṆGU, AND ANUMATI.

Rākā (ii. 32. 4. 5. 8; v. 42. 12), Sinīvālī (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 Ṛgveda 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). Sinīvālī 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 (amāvāsyeye) according to the ritualists (वाप्रिका:). Sinīvālī being the earlier, and Kuhū the later. Sinīvālī however is also connected with parturition, being called प्रभुद्रका, 'the broad-joined' (or 'bushy-haired'), बहुवर्ती, 'the prolific,' हुवाहु, 'the handsome-armed,' खुदुरि, "the handsome-fingered," being supplicated for progeny ii. 32. 6. 7 (प्रजासु देवी दिदिति न:), and asked to bestow pregnancy, x. 184, 2 (समसु वे हितिनिर्धात्री); 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 Rig-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,

enjoy thy benevolence; for thou, Anumati, dost favour us.”

The following hymns in the Ṛgveda 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 Guṅgu, Sinivālī, Rākā, Sarasvatī; Indrāṇī and Varuṇāṇī for welfare.

v. 42. 12: See p. 116.

x. 184. 2: See p. 119.

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CHAPTER III

DAKŠA

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 Prasūtī, 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 Vīrhadra; 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 Rgveda 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.

श्रवन्तिषवांश तत्: प्रजापतिरिविणि तत्तमादिविनाथभिवायाद्विब्रह्मीश्च प्रदेशसर्वेऽः: प्रजापतिशतीः।

Suśruta Samhitā, I. i.

श्रवन्तिषवांश प्रजापतिरिविणि तत: प्रजापतिमलिबद्धः।

विश्वास्तुती तो सहस्राय च। चतुर्विवादिकानु समनवः।

Aṣṭāṅga Hṛdaya Samhitā, I. i.
GENEALOGY OF THE TEACHERS OF MEDICINE.

Brahmā
   | Prajāpati Dakṣa
   | Aśvini Kumāras
   | Indra
| Bharadvāja
   | Ātroya
   | Gālava and others

| Agniveśa | Jatukarṇa | Bhela | Hārīta | Kṣarapāṇi | Dhanvantari
|---|---|---|---|---|---
| Caraka and Drāhavāla | Redactors.

| Suśruta | Aupadhaṇava | Aurabhra | Paṅkalavata | Karavīrya | and others
|---|---|---|---|---|---
| Nāgārjuna (Redactor).

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.
Formulae attributed to Dakṣa:


I. MAHĀRĀŚNĀDI KVĀTHA.

कहऽराखाद्विका:।
राखातारतिरूबलव वायरक दुरालभम्।
स्तीदादविन्मानातिनितिष्ठमया।
वरद्वायचित्तव समधिमधुपपर्णवा।
अभोधाध्यतात्तज्ञः कहऽदारिहतारी।
वचा सहवचभवं व विविकाहर्षितवयम्।
समभागान्तिस्ते राखादिगुणभासिके।
क्षपायं पाथवेन् स्वहस्तभागाविशेषितम्।
श्रव्दीवृंजसमयुक्तमाहायेन सुख सत्ता।
रससमुपदिस्तंबरकमाहादिदिवसानमुमा।
यथादीवं यथावचि प्रथथं वायवेत् भिषक।
स्वेषु वातरोगेण सभिमज्जगतेषु च।
क्षनासुष्टु स्वेषु समभागातुकषते।
क्रजके वामने चेत प्रचारमे तथााः।
शाकुवषायुः स्वेषु समभागातुकषते।
प्रात्र वातरके स्वास्वलुभि समायासि।
स्वत्स्तविबद्धत्रिगुणभिस्वस्विद्यः।
प्रजाधीस्वयनं स्वादिगुणकामीति।
पुष्पां सेतुगति रंगी कौशा वनवामी तथा।
योगितां गंगेश्वरं शुभं नाभि निरिष्ठिद्य: परम।
सम्बन्धः पावनानानु श्रेष्ठनित्तिति पावनम्।
कहऽराखाद्विकाः सम प्रजापतिविविष्ठितम॥

प्रत्य कहऽराखाद्विका:।
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 Saranyu, the immortal daughter of Tvashta (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 Apyayoni (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 Yamini or Yamuna 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. 138). 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., vii. 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, ‘Yam. has become the same as we are.’ Muller 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 Satap. Brhma., 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 Vayu.
Max Müller understands Vivasvat to represent the sky, Saranyu the dawn, Yama originally the day, and Yamī, 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 Rgveda 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 Saṃjñā, and the brother of Vaivasvata Manu, and mythologically, the father of Yudhiṣṭhira. He is the judge of the dead. For the Paurānic 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, Thratayana and Keresaspa of the Zend Avesta; and these names are again to be traced to the Rgvedic gods: Yama, Traitana and Krśaśva.

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 Ṛgveda:

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 Aṅgirās as Indra by the Kavyas.
4. O Yama! take your seat with the Aṅgirās in this sacrifice.
5. Come with the Aṅgirās. We invoke Vivasvat, your father.
6. Our forefathers Aṅgirā, 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 Trikadruka 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 Sarṇyu was concealed from men, and a lady like her was given to Vivasvān; she conceived the two Aśvins; and Sarṇyu 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 Rgveda. He rather occupies a more conspicuous place but his connection with water can distinctly be traced in the Vedic literature (Rv., 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 Rgveda 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; vii, 25, 8; 56, 1; 90, 2); as Rudra, the terrible (v, 70, 2, 37); as Asura, the divine (vii, 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 मेते दे चक्रवित्ति मुद्दते: मुद्दते च वाङ्क्षी रात्री।

Sāyaṇa.
(Taitt. Br., i, 7, 10; Taitt. Samh., i, 18, 16; ii, 1, 7, 4; vi, 4, 8). According to Satapatha 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 (Westergaard) 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, 18; 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
VARUNA

Vāsiṣṭha 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 ‘Uduttamam Varuṇa pāśam” never suffers from any disease. He gets himself cured of disease, if he recites this sāma:

चटुपम  वदिकपानमित्येत  सदा प्रस्थानं सम्बधं न निग्रहं न निगलं प्रभुपाले।

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 Rgveda, 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 Sunašepha, wherein King Hariścandra is said to have been attacked with the disease.)

The idea that dropsy was caused by the wrath of Varuṇa 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 Rgveda:

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).

In the following hymns Varuna is invoked with other god in the Rgveda:

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 Rgveda the Āśvins are described as the twin sons of Vivasvat and Saranaṇyu (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). Usā is their sister (i, 180, 2) and Urjāṇi (i, 119, 2) or Śūryā, 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 Āśvins respectively. Now who were these Āśvins? Yāśka, the oldest commentator, in the Nirukta, thus remarks:—

तस्मानं अभिभविदी। बाला श्रविकी दति एके। अहोराविदी दति एके। सुर्यचन्द्रबचनी श्रविं एके। राजभावनीक्षकात्री दति ऐतिहासिकाः। तथोऽकाल जगद्धर्माचार्य प्रक्वाचित्वयी अनुविद्वद्वधन्।

“Next in order are the deities whose sphere is the heaven; of these the Āśvins are the first to arrive. They are called Āśvins because they pervade everything, the one with moisture and the other with light. Aurnabhāva says they are called Āśvins, from the horses. Who then are those Āśvins? ‘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 midnight, whilst the manifestation of light is delayed. The dark portion denotes the intermediate (god=Indra?), the light portion Āditya (the Sun).”

Roth following the remarks of Yāśka, identifies the two Āśvins with Indra and the Sun; but this identification is

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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 Ṛbhus 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; Nīghantu, 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 Rgveda the Aśvins, like the Ṛbhus, are described as men नरी (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 Rgveda 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 Ṛv., 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 Centau-ray 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 Āśvins." ¹

The Āśvin 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 Āśvins 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 Āśvins, 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 Nauŋghaithya.

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 Viśnāpu to his father Viśvakāya, the son of Krṣṇa (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 Sundhuyova, the beautiful daughter of Purumitra (i, 112, 9; 116, 1; 117, 20; x, 39, 7; 65, 12).

(5) They favoured Bhuju, 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 Rjṛāva of his blindness, inflicted as a punishment by his father (i, 112, 8; 116, 16; 117, 17; 120, 6).

(8) They restored Parāvṛja, 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 Kakśivān, 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, 5, 40, 7); and gave him food and made him young (x, 147, 1).

(13) In response to Vadhrimati's invocations, they gave her a son called Hiraṇyahasta 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 Kākśivān, of her leprosy and gave her a husband even when she became an old maiden (i, 117, 7, 19; x, 39, 5, 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; viii, 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 Šroṇa 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 Nrṣada (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 Prthušravā’s enemy (i, 116, 21); killed Šamvara for Divodāsa (i, 112, 14); also killed Pani (i, 184, 2).

(22) Sāved Rājarṣi Antaka, Karkandhu, Vayya (i, 112, 6), Prāṅgi, Purukutsa (i, 112, 7), Kutsa, Naryya, Śrutaryya (i, 112, 9; x, 40, 6), Veṣa, son of Aśva (i, 112, 10), Kakṣīvān, son of Uśīja (i, 112, 11) Māndhāta (i, 112, 13), Bharadvāja (i, 112, 13; 117, 11), Vamra, Prṭhi who was without horse (i, 112, 15), Śayu (i, 112, 16; vii, 68, 8), Manu, sage Syūmarāṣmi (i, 112, 16), Śaryyāta (i, 112, 17), Adhriigu (i, 112, 20; viii, 22, 10), Kṛṣānu (i, 112, 21), Kutsa, son of Arjjuna; Turbīti, Dabhīti, Dhvasanti and Puruṣānti (i, 112, 23), King Jāhuṣa when surrounded by enemy (i, 116, 20; 117, 16; vii, 71, 5), Vaṣa (i, 116, 21; viii, 8, 20; x, 40, 7), Dirghatamā, son of Mamata, from fire and water against Traitana (i, 158, 4-6); Priyamedha (viii, 5, 25), Medhātithi, Daśabraja, Gośaryya, (viii, 8, 20); Tryasasyu (i, 112, 14; viii, 8, 21), Takṣi, Paktha (viii, 22, 10), Uṣanā, (x, 40, 7); Kṛṣa (i, 112, 14; 7, 40, 8); Śvaiyava (x, 40, 8), and Kanka (viii, 5, 25).

(23) Learned Madhuvidyā1 from Dadhići son of Atharvā whose they supplied with a horse’s head (i, 116,

1 According to Sāyaṇa Madhuvidyā, also called Apikakṣa is the science of re-uniting the severed head with the trunk: हिरण्य य सिर्सः
बछप्रदेशः मुनः सत्याग्रहः प्रवर्गितवाच्यः रक्षसः—Sāyaṇa (i, 117, 22).
12; 117, 22; 119, 9); became a guest of Divodāsa (i, 116, 18; 119, 4), came to Jahū’s sons with riches and progeny (i, 116, 19), and gave food to Manu (i, 112, 18) and Saubhāri (viii, 5, 26).

(24) Gave potable rain water to merchant Dīrghaśravā, son of Uṣīja (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 Ṛcatkā (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), Vāsa (i, 116, 21), Aṃśu (viii, 5, 26), and King Suṣāma (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, Sumīḍha’s cows, Peruka’s food, King Sānta’s horses and men, and Purupanvā’s horses to Bharadvāya (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, Dīrghatāmā and Prthi, son of Vena (viii, 9, 10)

(31) Gave rain water to Manu and furrowed the land and sowed wheat (vii, 22, 6).
In the Rgveda Aśvins are magnified in the following hymns:

\[
\begin{align*}
\text{i. } & 3 : 1,2,3. & \text{iii. } & 58. & \text{viii. } & 5. \\
\text{20 : } & 3. & \text{iv. } & 43. & \text{ } & 8. \\
\text{22 : } & 1-4. & & 44. & \text{ } & 9. \\
\text{30 : } & 17. & & 45. & \text{ } & 10. \\
\text{34. } & & \text{v. } & 41 : 3. & \text{ } & 22. \\
\text{46. } & & \text{43 : 17.} & \text{26 : 1-20.} & \text{ } & \\
\text{47. } & & \text{51 : 11.} & \text{27 : 8.} & \text{ } & \\
\text{92 : } & \text{16-18.} & & 73. & \text{29 : 8.} & \\
\text{112. } & & 74. & \text{35.} & \text{ } & \\
\text{116. } & & 75. & \text{57.} & \text{ } & \\
\text{117. } & & 76. & \text{73.} & \text{ } & \\
\text{118. } & & 77. & \text{85.} & \text{ } & \\
\text{119. } & & 78. & \text{86.} & \text{ } & \\
\text{120. } & & \text{vi. } & 62. & \text{87.} & \\
\text{139 : } & \text{3-4.} & & 63. & \text{101 : 7-8.} & \\
\text{157. } & & \text{vii. } & 67. & \text{x. } & \text{24 : 4-5.} \\
\text{180. } & & 68. & \text{39.} & \text{ } & \\
\text{181. } & & 69. & \text{40.} & \text{ } & \\
\text{ii. } & 37 : 5. & & 70. & \text{41.} & \\
\text{39. } & & 71. & \text{65 : 12.} & \text{ } & \\
\text{41 : } & \text{7-9.} & & 72. & \text{106.} & \\
\text{73. } & & \text{131 : 5.} & \text{ } & \\
\text{74. } & & \text{143.} & \text{ } & \\
\end{align*}
\]

References to the Aśvins as medical men in the Rgveda:

i. 34. 6: Prayer for heavenly medicine, earthly medicine and aerial medicine. The three elements of the body mentioned.

Nursed Śaṁju son of Vṛhaspati.

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: Prayer for long life, food and strength.
182, 8: Prayer to save us from old age.
183, 6:
184, 6:

ii. 9, 4: Madhuvidyā Viśārad: Versed in the science of
reviving dead men.

v. 75: The mantras for prevention of abortion

78, 7-9: The mantras for prevention of abortion

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 "चरितं दि वैरवाच्यं दि परमं स्रवणं
आजा वेलम परितक्ष्यावाम्।
सयी अंधामायसी विश्वलालये
धने विलित सचिे प्रवचनम्""

Ṛgveda, i, 116, 15.

Sāyāṇa.
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 Pusāna, 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 Samhitā 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 Rgveda:

Śatakraṭu (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).

¹ A. C. Kaviratna's Trans. of Caraka Samhitā, pp. 1067-68.
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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, 28, 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 Harītakī-kalpa or ‘Doctrine of Chebulic Myrobalan’ 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 Harītakī-kalpa which gives the doctrine of the ancient physician Hārīta on Chebulic Myrobalan occurs in the Hārīta Saṁhitā in its Kalpa-sthāna (printed Ed., p. 400).” (Hœrnle.)

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 Harītakī-kalpa. Dr. Hœrnle thinks them to be mediæval 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:

चतुर्दशा रचनालेखः पत्रसामः ।
रीषे च्छेदन तथा तत्ता नामां वञ्जं तदावस्म् ।
मरवेश्यो भवतात् रोगवशाय दे नराः ।
रचनालाः हि चातुर्दशाना कृत्ता एवं हिताय वे ॥

End:

इति—वैदिकशास्त्रम् पररत्निकुमार संहितायं रचनाला समासामाः

See also Devadatta of Guzrat (14th century).

---

Footnote 359 in Bower MS., Ch. XI, p. 164.
5. Aśvini Samhītā:


"A treatise on medicine said to have been revealed by the celestial twin brothers Aśvins. Contains Kanarese meaning for the stanzas.

Beginning:

चचबम् वचा क्षुि गजपियाशिता समान्।
निषिद्धानवमर्येन श्रीपान् प्रावर्षिते॥

Colophon:

शव्यिनीसंहिताया संश्रीपान्धरिषये॥

End:

धयपच्छाती दाह: ठैंटि तिथिन्दु सदाधवस्।
विप्रम वा क्षरं क्रयत् चतु आपदन्वच 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:

भादी समस्तरीशयु भट्टार्थ परीमचिस्।
भादी च सम्बंधः च शब्दनियप्रीतिः॥
नाभिनान्ति च जिन्दा च एता हम्या भिषीषे:॥
भादी रोगपरीच(श)सादी समस्तरीशयु वातशेष पाप्पिषत्तन्त्वरीशयुः। भट्ट-
शासनंतनाकी परीचियस शोचितः॥

End:

सर्वां रोगाधार् पतं वड़ुश्या श्रमः॥

Colophon:

शत्रुनिर्मितान्तत नाभीपरीचया समविच्छिता श्रीकाः समासः।
The formulae attributed to the Aśvins:—

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1 For the list see I. A., February 1914, p. ix.
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1. Māṭulāṅga Gūḍikā of the Aśvins.

2. Aśvins’ Māṭulāṅga Gūḍikā.
3. Asvin's Gulma Curṇa.

4. Āśvina-Haridrā-Cūrṇa.
5, The Lasuna Clarified Butter,

मामिन् लामनक्न नाम चूतं।
लामनक्न चतं विविष्णैर्जीर्थि विपच्यित्।
चतूर्तमाणवेशचं क्षणावर्ततारित्व।
तेन वैयः क्षणविन विपचेत् चतुिर्वेदम्।
कल्पेिपथाणि वैतानि सिद्धार्माणि प्रदापवेदौ।
कर्षिकसमुखसं पिपासी कर्षिकेब्रह्मच।
वायायाघ भवेनक्ष्मसं महन्देिर पलं तथा।
लवणांभक्षय च पदानांम प्रकाष्ठारूिवत्साल।
तथा रामाङक्षापि हिन्दुस्तनु पदवम् भवेन्।
ततस्थिति निसुं ते महसां तिस्रितवेदौ।
ततोमांना पिपेतकाले मथं से बिपुन तहतस्।
वातर्शादभु ग्नामिर्वात्तुष्मो ब्रीहोऽिध्रुरी।
वातेन्नाथिराषुनाममसुपूर्य भगवंद्री।
एकार्रोगिणिणां दुःखस्तु तथा सङ्क्रिरेश्चामु।
लमनायं चूतं जीतहित्वां संप्रजायतम्।


8. The Vindu Clarified Butter.
9. A Formula of the Aśvins to cure Haemorrhage.

राजपिनिनामान्यिनी योगः

विघटश्चद्वी श्रीमन्नाथिकर्मी भिष्णुज्ञान, वरै।

योगम्। लोकरितपिनिनामसंहास ज्ञररितिः च।

शार्यविचळहः केषम्, युद्धम्, ब्रह्मापुः।

वन्दनं नवदमः, रोगसुमोरम्, परकेशः।

मागुपाध्य विलवय भ्रामसाय श्रोः।

हरिविन्द्र राजार र वरदजन फलं लब्धं।

रणकौम्भ, सर्वविवः धातकीम, सर्वदानकाम्।

शान्तिन्य जन्मुचारितत्व तथा स्वरसं भवेः।

शीतोपालमु समसां च श्रृव्यालम, दार्दिलक्षम।

चतुर्विशयं चतुनाशिन समभागानि कार्येः।

तत्कलिदक्षरं चौर्लिष्य सह पायेः।

हितसे लोकरितपिनिनामसंहास, ज्ञररितिः च।

मृच्छात्मीपश्चानाम्, दवाचानाच द्वबायेः।

अतिसारम् ज्ञात्विष्य योगम्, च राजयोगम।

ब्रजिभारुन्नी योगी राजपिनिनिवारयः।

प्रथुताणां गर्भणाम, ख्यानम, च प्रसुयते।
10. Amṛta Oil.

भन्त-तेलं नाम।

सत्याग्रहिनी देवी भिक्षुं देवपूजिती।

× × × परम—+ तेषां पुष्पि विबेनम॥

सत्याग्रह श्रवणं राजाइमश्चतीपम॥

भन्त-तेलं विश्वामते तेता विश्वाम।

सुभूमि मधुकं जातमुद्रितं वत्संक्रल।

पुष्पिः प्रत्यती विप्राणु खृश्वानं खसास्यं॥

राहियेत् सरसं तथा पतुष्पालम् विचारण।

प्राप्तिकर्धकर्मां, विनिध्विभं मतार्हीम॥

प्रजाक्षाममकानानुमुखर्षेष्ठक।

चीरिषामृ चैव प्रथमां, वचानि सु यूप्रयक्ष्यक॥

कुशकारशिपुमुलानि शरीरर्योक्तः।

गुणानम् मानिकासम् च सूचम, कौकान्तकानि च॥

वदरीच विद्यारोच विद्यां साहित्यकम्।

निष्ठाश्लखितवर्णनालिकार विप्रकव।

पतीयं कुटकं दााङ्गं चम्मानं, च चन्द्रनम्।

कुमम्, चायकस्य च लामुक्धनंनवः॥

क्षायसमधुरांचं श्रीतावर्यं च लामतः।

भागम, चतुर्पशान्तकालविद्याचिपाम, विप्रकव।

रक्षेत् नमार्यं तु कक्ष्मे रोगिन्विषपोषयः।

वलं नामवलं जीवामायुगाम् ज्ञेश्वाराम॥

नतं रसं च स्वरं च चुजेयं च चथेन सेव।

जीवकर्धकाः सैदी मधुकं तीव्रस्वल।

कुमम् च जातमुर्महं प्रेमेतं च।

विद्यारोचं चीरिकारुकोभं वीरस्यसि च सारियां॥
HISTORY OF INDIAN MEDICINE

शतारीम् त्रियक्षम् च गुठीम् पद्मेशरस्।
लामाजकं चंद्रशानि राजादन फलानि च॥
सुखाविद्वे संहानाम् चन्द्रकालक्रमीलोऽधि:॥
स्फाटिकं रजतम् च चंसं संहरीकाःस्मिः च॥
येतसंधुकाविडाम्बिकामथा: पलानिनानान॥
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तेलपालवरी चालार: तेलचार्ग पयः॥
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विशिवाधा विशालितम् सूत्र प्रयतः कलभक:॥
प्रयोजित तेलचार्गम एक्षरितम् देवपूजितम्॥
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समूक्षरोम्रार्गम दिनद्रियां वालाचारः॥
दानाक्षरविनानाम् शेषसमध्यवनं शिवस्॥
कस्मां वातानांवालानामक्रवाकवानम्॥
कालवं नित्य स्रीमयं प्रजां वर्णविशार:॥
विश्वव गमं रत्नानि प्रयोगाद्वितं च।।
भीतितम् वातानां रोगिन् रजानां पित्रजं सत्या॥
दिविकान्त विशिष्ठलोकान शास्त्रिव चिन्तित।
सुपर्ण चद्भांस्मिः स्थायधायादारः॥
पापस्मरसल्पीतः श्रीमिवावितवर्जनम्॥
चंस प्रयोगात् तेलस्य सध्यं: यवं: किल॥
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तेलमेति प्रयोगानि दीपांग्रुपवास्मानित।
11. Kṣīra Yoga.

चीर योगः।

शुद्धेन खपयित्र चीर कद्दुषं कामत्, विविहत्।
सुवर्षेण भेषज्यम्, सुवर्षं सतमिनदीनः॥

12. Ayorāja Yoga.

अयोराज योगः।

अयोराजः वृषपिष्टकः सधुर सहयपयितस्।
सुवर्षेण भेषज्य वरस्तं सतमिनदीनः॥

13. The Asvagandhā Enema.

अश्वगंधाविधान वसितः।

भतः परस्म प्रत्यत्तानिः वलवतं प्रसादनम्।
शीन सांवानि वरितो वलं चैवियायते॥
सुझानीसनभाय: पथरंशतपलानिः तु॥
कलन्धश्च दायिलातु स्वात्माणाधाय साधयेतु॥
पादभागाविद्याय भाला समवतारिते॥
तदन्तः तु परिश्रव्य हड़पावेदुरस्विधेयेतु॥
ताशिन् कथवे मतिमानीष्ठानि प्रकृतियेतु॥
जीवनि सोणानि श्रांग राज्यसेव ॥
सुभुधापिष्टक वसेत् निपलीवृच्छसेव ॥
कितिक्षरविक्रमस्तं कहाव खेजनालोकविघ्रिक॥
आशीणं वसावच्छ्वदे वसिक्षरापि कारयेत्॥
एकेन यदि वा दाम्मणि विक्षणाची प्रमाणतः॥
प्रकाशते निषेधिताम् परिपक्षः सुखाभुना।
ततो लोहित शालीनामीदनं मधुसूप्यिन्।
चीरिष रश सुखीत जाननाम् रशेन वेषत्।

14. **Pippalī-Vardhamāna Tonig**

पिपली वर्धमान रसायनं

पिपली वर्धमानसः गुणः कर्षण च के वल्लम्।
प्रवलाम्बुमूलेन प्रजाना पिन्तान्यांविभैः।
न छौतदशसम् पिलापयाद्यन्ति मामवः।
दर्श्येव निमित्ति हि पापावासलकं यथा।
तथाप्राचीनेषु पुरुषं प्रजां मेधाका कार्यत।
रसायनाहिमन् सीवं कार्यामधुर्णिवर्धनं।
जीवनीयादि पिला तु लिहितानविनिवाशु।
क्तसंसर्जनः कालि प्रयाजनारम्भतः।
पुर्णश्चय पुश्यत् रविचेन श्रवितः।
पिपुलेवतु हस्तेन सोभि योगामात।

छतोधित: पव वज्ञातः गुरुरासा निरीक्षितः।
अवश्य एवतानु विप्रस्तु वेकाम, खाद्यत पिपलोम्।
तत्तथानुपवेक्षी चौरंग गन्धं कामावधीप वा।
जीविनण्डत्वा स्व सुखीत शालीनाम पवसोदनम्।
एवत्तत्रात् खाद्यव वर्धमानं सदाहित।
शतं पुष्करं भवेदाक्षम वर्षायतेव च।
ततोन्द्रव्यकर्षसिस्स ससर्सम पवसोदनम्।
प्रायोगिकमोजवं तथा सुधर्सोदनम्।
ससर्सि वल्लि तु जाइलो सधृंरा रश:।
भोजयं पेंच च पानीयम् यस्तीती शृणुविन्तम्।
स्नाते निवाते चाहीत सततम् दितिस्विवः।

ततः क्रमिष्ठमानवधार्येमुपकारयेत्।
THE AŚVINI KUMARA


dhāraṇē vā dākṣiṇāmaḥ lokaśa śrānaḥ śīlāvēte. 

निम्ने बिधिना चिंतां पुरीं लभति सानवः. ॥

प्रभदः लभते गभृमृ वन्ध्या चापि प्रजाधिे. ॥

सायणके निपि निर्माणि राजयादि। इष्टीक्यः: ॥

पपचारलयोवादी ज्यरः विस्मासतः ॥

निम्नकः: प्रव्रते तु वल्लिपलित नाशने ॥

वर्षेन्तीर्याशानास्मि योत्सम्बन्धः ॥

कुर्ष्रीमिंहन्नारामरोमगनम् विवेस् ॥

दर्भद्रणजस्स देश्याध्यायाम् प्रधाननम् ॥

पिपलाकृ हि शिवः: कावि कठुका सधुरान्यः: ॥

विन्ध्यान्न नीतीवायेष व्यवपित्रो गुप्तान्विता:॥

कठुकलान् कांपे पथा: खु छड़ पख्वने हितः: ॥

शैवात्सिन्यासनना गुर्जनन सर्वगःभूमी ॥

विभः: प्रवर्तिते चाय्यः: कथः: पुचिर्येच च ॥

अन्तःको दशक्षणी वर्धकालमेल्यं च ॥

चीरांपान्यः: कार्यांकथा चीरोपपेना: ॥

नियमान्याधरामानिष्ठक्षेत विषये: ॥

टिट्स्यिन्यसामालस्मी पुर्वेशय व्याकसस्मि ॥

प्रधोधिमित्सारवन्याशिवमुलत्वेव वर्जनम् ॥

पिपलाकृमान्यः कान्यो प्रभासम् प्रकाशितः ॥

अनुमून्यः प्रवाहंगो व्यास्मितिनवार्यः यात् ॥

सम्यक्षान्ख सप्तान्य सप्तां सफालण्याः ॥

कांक्षाचोला प्रवाहं सहस्राभिमित्सारं: ॥

तुलापां तु जलद्रोहे विपाचवेथु ॥

चतुर्भोगियां तव ते तुलापां विपाचवेथु ॥

चतुर्घुने पवसे कल्लों ब्रह्माण विधानविव ॥

प्रपीक्षोकरम स्थुकम् राष्ट्रामुलम् श्राववर्षै ॥

विन्दुः: शतपुष्पाय स्थूलमिस्मास्कालिनि च ॥
एतद्धार्म्यं पानि नक्कमादवाल्नि।
श्रोतस्य वातजन्मांतः चतुर्विभक्ति।
महास्करश्च: सरसः प्रयोजः चौरिषण विषिषुक्रस चूर्ष्मस।
रम्य गुदुः वांशूसर समूद्रपुष्म आयुः पायुदासमष्ठाः।
वाच्चिप्रथविष श्वदितवेदनां संध्याबि चेमानि रसायनाः।
कलः प्रयोजः खणु महेपुष्म। संध्याविषेश तु मरुपुष्मी।
छतमाशिकायं मुखं द्वः पिबेन्मकेः।
चौरिषणपीय सीवर्जर्: स जिवित्वात्दाशतम।
पञ्चतीस सदशः चापि पिपाखो मधुरपिण्डा।
रसाधिस्थारेयसु मायामकम् प्रयोजबङ्ग।
विषोजशस्थल पूवाङ्के मृतत्वे भोजनम्कर्ष च।
पिपाखः किंगकचारामरिता छत्तमिण्ड ततः।
प्रयोजः छुरवस्मिन्ना रसाधनमोषेष्विता।
जेत् कामः धयं ग्रीयं शास ग्रहः सिंहः गालामस्म।
अभासिन्य ग्रहम्वीपिं वणुतां विषमायनन।
पोषस्य सर्वेदशा गुः वातमादमकर्ष।

15. अश्विनि-रसायनम्

प्रविवारे चायम्।

tपय्यामानम् तपिपाखव विद्वासितं महासुमिन्।
भविनी द्वेष भिमपुष्माच्यंत्वद्रमं वरी।

tपयक्रमेकव नरसायनव युन।
रसायनमिन्ते श्रवचारीयवपववेत॥
गौरीसंतकवरसानम् प्रक्ष: श्रार्धिनिरीक्षत:।
एकविश्वरङ्ग तु सरसमेव भावशेषत॥
प्रक्ष: दिंपिश्वरसानम् प्रक्ष: शार्थोधरी भवेत॥
त्री प्रयोश्च मधुम: शारी सरिषंशायकम: भवेत॥
शसं राज्यां है प्रख्यावेक्षक: चित्रकाम॥
16. **A Formula for Three Different Gruels.**

चातुर्वीयीयः यत्तदार्शम्

शतपुष्पं साहित, विल्लकुदारं चिवकं वर्धं
बिकुं, चौवक्षं चौब श्रद्धापरं संप्रियलीकृतम्
पलांक्षकं च लक्षमं दार्शनम् तुल्युदिनं
कृष्णदुम्बजालीच समभागानि कार्येवत्
तिष्ठ, जानमके भुक्ताय主旨ं साधविधिकृतम्
गौरिणारभुविवस्वं सूत्रकुंकुम साधवित्
वाक्यी वातिका रोगाः, संरचन्वितानि नियमिणिति
पथं वद्यागुराध्यातः भाष्या मिथजं वराभिति

17. **The Doctrine of Chebulic Myrobalan According to Asvins.**

हरितकीकेल्यः भाषिनः

स्यात्सि हरितकीकेल्य व्याख्यागाः

सुखोयविषं भ्राष्टाय, अभिनेन वाक्यसंघं
कुंकुम हरितकी आता कांतियोविष कीर्तिते
रसायन कति संख्यातः, कति चोपत्रेत: सूत्राः
कति नामानि वर्षाः बा नाभि नाथि ध्व लक्ष्मि
कां य रोगात्मकमये वषः रुपानि कामि च।
केन द्रश्यां संतुष्टिं जानु रोगानुष्ठिप्यवशच्छविः।
एतं प्रवत्त वदा पृष्ठ भवतां वसु-महंसि।

ज्ञितोऽयचन्नाम् सुला द्रशा गच्छनम्।

भवह्याम् यदिदं प्रतस्य व्याकरणम् प्रथकू।
प्रवचायणपुवेंम पुण्यकरम् + + ||
पयात विन्दुभोधियाम् शक्राम् विवतोवर्तम्।
शैवनिः सत: नॅटा ध्रुवकां हरितकी।
विजया नेपताचेऽश्रविषिरी पूरनाशिता।
श्रीमन्नभया चैंत समयोऽन्निरतिकी।

अलावहस्ता नियम्या या चता सा तु रोगिष्ठी।
पुत्रनाशिमभी धुता धूलमांसकलात्त।
सुरूष्कथां श्रीमन्नी प्रवचनी विहस्ता तथा।

भम्या कालिका लोकी निर्पीडः प्रवशम् पुरा।
एतासं रस्मन्नमाणि रस्मवीचे समांसत।
हरितकी पवससुक्ष्ममांसवाणि विन्याम्।
सुधी लवयत्वाणि व: हरितका निरस्त्रवः।
निरहरलित नलेः ययादरोगयायुसत्सतः।
शिवा विप्रय सुरुः च सुपचारा सदाभमया।
सुरुः पुरीकरी चैंत दरिद्राणि चिकित्सिल।

तत्तेव सुकुमाराणि प्रयासाणि श्रवे नरा:।
भम्या शि दुःखा चन्द्रा चिकित्सार्यव सदा हिता।
सुन्तं काम्यं तु य: तान्त्रिकम्या समरंप्रस्थाप।
व्याख्यानम् च पिपलयो न व्याधिविवेदि तमः।
गुडमिंगंतिनया तु हे हे खार्तित + + 'ः
सहस्त्र समा: प्राया नरा: सहामियाविधि।

धम्यां सह सुहृतां सुहानी लघुभोजम।
संवाच्छलमां श्रीवेंद्र प्रष्ठा विन्यायु गदान्।
न्दोनि बलस्वस्वावी वलीपलितविज्ञातः।
श्रीलोकारी शरीराः च भवेन्त्रर्य निषेविता।
अभवाच कृर्तिकान् विषयवः सैभवमः।
कुलं चे व समावतं गोमुखेष्व विरेचिनम्॥
गुरुः द्राढारसं चैद्रं तत् च च चरितकी।
परतं वाङ्मयनग्रीणं वेत्तिकाणं विरेचिनम्॥

पिपलः सैभवं चे व विष्णुवालं चरीतकी।
प्रदाग्रीमुचं च सहितं विरेचिनम्॥
चरितकीं समगुरं सदनं सह संयुक्तम्॥
युज्ञं वे चरितकीं योगं सिद्धं स्थाय रसायनम्॥
सर्वात्रोगालयिनीगणम् पृथ्वींकृष्णं च हि चरीतकी।
व्यायामं तत्कामोदं विष्णुरेचिनमं संपूर्णम्॥
विषयं च सुरानाच विषयं हन्नातरीतकी।
पाठकं बधेभिषेयं गुणं चामु विष्णुवालं।
चरितकीप्रणयास्तु जटरावणं नामविषय।
वायुग्म साधव्येऽयं कांहारतां ध्रुविशायम्॥
कारं वायुक्त हिंसां च तमोगरुलं प्रतानंकम्॥
चभयं मातिवर्जये वसुवनिमिवशुरा॥
कामण्डं चे व भुजर्जन्त नामविषयकी।
भूवंशं च भगवती चे व विवेकविनाशनी॥
चरितकी प्रयोगाएऽहं च विविधयिति।
उहं सर्वस्थितं तीस्मस् + प्रबोधिता:॥
श्रवणपरित्वपातं प्राप्तं रीतकर्मं, चरीतकवं।
श्रवणं + + + वायुवस्था॥
श्रवणं चववं च सामस्मर्दीर्द्रकम्॥
हरिभुवंचे व भूवं च चरि सर्वास्तिरिप्पा॥
वायुग्मं चे व भूवं च चरि सर्वास्तिरिप्पं॥
यथा वीर्यान्वरो युज्ञं वलवानु वायुनं भवेत्॥
तथा सर्वास्तिरिप्पं गुरुः चाश्चरीतकी।

तत् श्रीका:।

यथा कुमारभिन्नं भिन्नं भिन्नं भिन्नं भिन्नं भिन्नं।
दुरास्तं चे व विन्दुर्योम & गदाधरस्तमादान चरीति॥
18. Vṛhat Gudā Pippalī

19. Phala Ghīrtā.

विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां विकारां
21. **Amrīḍya Gīṭṭa.**

अम्रीड्या गीट्टा

अयुत्तम आर्म निष्का नागर वल्ला।

वासार्ब्बाधव्योर-द्रव्यदर्शविकल्पसः।

कठोत्तत सञ्चरी ज्ञान काश्यपं पालनि च।

राखाच्युतवर्मणि-कडांदारविनयिनि॥

कष्टीयास्मि: समि: नाला सार्क्ष्य: प्रस्या विपाधविने॥

धारीरसमभ दल्ला वारीविकल्पसंयुतम्॥

सम्प्रन्निद्यु यक्षाय भोज्यपि यस्यस्याति।

तवहोलावितं नातं र्येँन वह सुखिततम्॥

उत्तात्तापि गब्रीरं विकल्पांजलात्तमस्॥

श्रीहृण्येष महायो नाभायति सुहालो॥

वालोगोपरार्णो वेदनांकापि दक्षराम।

सुधार्क-सुदवाणि प्रस्यं विपक्षसङ्गरम॥

एतानू सर्वानू निहत्याय वातपितककोभदनानू।

सर्वकालीयोलिन वशायुक्तकालीनम।

अधिन्या निर्भितं एवं घनमेतदशसम्॥

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22. **Amrīṇaś Āvaliha.**

अम्रीणश आवलिह:।

चीरि धावी च मिहिराच चौऽधाग तथा रसः।

परिवृतः सशैः इत्यं प्रस्त समय: कार्यमित्रत:॥

त्रायत विचित्रत्विनायः: शकरोरुपपन्नकः।

सकुष्क-सुमालनाः काम्याः र्योप्यांकरः॥

प्रकाश' समुन: शीति शर्करार्यास्ता तथा।

पलार्विकाश्च सखीं लक्ष्याप्रकीर्षरानू॥

विनियमबाज संविकाशं मादान नित्यं सुङ्कितः।

अम्रीणशास्त्रकोविद्यं परिकृतिसम्॥
23. **Punarnava Guggulu.**

पञ्चमायगुङ्गुल: ।

पञ्चायाय विद्यम् प्रज्ञानिकने गुङ्गुलोऽ।
प्रज्ञानं विनिरुपायं वर्णाम् प्रज्ञानवच: ॥
संज्ञानेतरं संचाय काशीवलनेष्मा: ॥
पुःशिष्ठरा पारशुरायमानं सान्तवसायत: ॥

प्रज्ञायाय निरुपायं विनिरुपायं वर्णाम् ॥

24. **Kuṅkumādyā Taila.**

कुञ्कुमाद्य पाँच ।

कुञ्कुमाद्य पाँच चन्द्रो लाल्ला सचिवा नरपञ्चायितका ।
कालीयकसोगीरच पद्मक नीलसुरुतपलम ॥
मनोधरपादा: प्रियस श्रद्धा: पद्मसा केदरसु ॥
विश्वसुलस्विन: करायेः: पलिक: पाँचक ॥
जलातकं विपक्षं पारशुरायमवर्तित ।
सचिवा चन्द्रमां लाल्ला पद्मकं मन्न्दिका ॥
25. **Godhūmādyā Gīṛta.**

शैवोधाय द्रवम्।

शैवोधाय पल्लवं निक्षाय शविलानकी।

पादामशे गुति च द्रव्यशीमाणि दप्यात्॥

शैवोधायवल्लकं माया द्रापा पुष्पकम्।

काकाको चौकाको जीवनी समाहारी॥

झगड़ा संहार्या संहारं दूर्यां स्तिता।

सयातकं संहारं सम्भागा विकाशेत्॥

छवमर्यं पचे चौरं दिशा चतुर्गुरम्।

शहित धित्ते च द्रव्याक्ति निविदित।

लघोशी पिण्डाय धायं कर्पूरं माग्नेयसरम्।

यथालाभं निविदः चिताभिरप्रलाभकम्॥

दंते चुदङ्गाकस्मीयो विधविहिनियोजयेत्।

शायोदेन्न मुखीत पितान्तस्य समेत।॥

केललश पिपलदश पल्लवां प्रमाणां।

न तथा लिङ्गसत्तयं न च युक्तवयी भवित॥

बलं परं वातहरं शुष्कसंज्ञनं परं।

मुख्याक्षरवं द्रापा अमपि यशस्त।॥

पद्धति तद्धीवाद्याभासक्तवद्रव्यम्।

श्रीमानं शनं च महती पीला चानुपिविश्वय।।

अष्टिमानं पिनिन्ते चैतंद्रोधाय उच्चायम॥
THE AŚVINI KUMARA


करूङ्गुष बाणोयकलनिकाशायाथात्विके-
पुष्प: समक्षलवासुरवाराणीसिंहसंगेिः।
एकाकुलमोऽवनादलकशायानातीवैः।
क्रोणालकसुकोजपातमसुराकानाज्ञवनामः॥

telôśirchāyuṣyaśanasākshīlakṣayabhasānশः

deaśīkumkāreuप्रकारमः: स्यूङ्गानिशः: पालकः॥

लाबायोगवंशिनौदीिसतीिनिवाससुरादकः
तेनाभयं तस्मिन जसदापि मन्वेश्वीणां परं वनम:॥

guḍakaiṣṇuṣṭिनिनिनिनन्नवनव: षड्हीरपि रूहुङ्गुः
वन्यम् समवती मन्वेदापि तथा हदापि सुङ्ग समात्।

cakṣुष्ठदिनिविचिकारयिन्द्रीम्यशकापि
सिध्यां परिक्रियतिं बहुषुङ्ग तेत्तः सुगमस्वस्त।॥

27. Guḍakusmānda.

अङ्गकुस्सङ्गम।

कुणास्काल्पस्तं सुखिन्न सिनुकीकालम्।
प्रशंथं च सृष्टसे भास्यनियोऽदापेित्॥

वक्षुपधार्यकन्याकीर्कोलाध्यायनस्य॥
धनिकं च सयसात्अस्पित्य: गुडीरकम्॥

पुग्रङ्गकं करेषं च प्रक्षं तालखसबकम्॥

पुष्पंकं पलायनं तु गुडङ्ग तत्वं परीत्॥
शैतीसुङ्गं पश्चापटी सहुः: संहदापायित्॥

कफपिणालिवंद्र सम्प्राणां च दीपसंभ।

स्यां देशं श्रेष्ठं वालीकरणसम्पादनं।

प्रस्तावी प्रसारां ते च सृष्ट: श्रीस्वरुपः॥

चायेषं च टहीतानं परचर्दिविजितम्॥

काकं चारं स्त्रं विग्रं हनि ष्ठङ्गं नरीष्ठकं॥

22
28. **Vrhat Narikela Khaṇḍa.**

हस्ताक्षरादिकृतकाठ: ||

प्रक्षणं नारिकेलं युष्टं हदिदं पेठितस ||

निष्कुलोकतं कुपाष्ठुं खस्तानामकाङ्करकम ||

ताहं भवं धैर्यं ध्यं तु कुपान्तरितं ||

तत्रत्वम विष्णुक्ङ्ङुं ह सूरुरुयमान्वतितं ||

तमौवं विद्विप्रव्यं स्वतं प्रक्षणयोगिताम ||

पपेखं सर्वार्थं चैव च जलं धन्यं विवेकं मिष्कुं ||

सुपुष्क्र स्वतं तव चर्चकायं विष्णुं विद्विपेत ||

वुष्टाणामकं धवशी पयपंडङ्गलं जलम ||

जसीरं चन्द्रनं द्राक्षं नक्षत्रनं कर्षसंकरं ||

लक्ष्यवर्कं सुकुपरं वन्यस्यं ग्रहं ग्रहेऽ ||

सधं सतिनि च चैव भाजनं धक्षयं नवे ||
29. Dāpimādyayā Gṛṛta.

दापिमाद्य ग्रःमः

दापिमाद्य फलप्रसं यवप्रडः तथैव च।।

हल्लयकुड्वचापि काययिला यमाविधि॥

तेन पादवशिषेष घटप्रसं विपाचयेतु॥

चतुःपदिष्टपलं चौरं चीरतुलं वरीरसम॥

दलस खवगिना कल्लेण रघमाच्युत: सह॥

प्राप्याख्युरकाकोली-दनोऽदःवश्रीकर:॥

तथा बेदास्मांपि बिफळादाजरीणोऽपि॥

विशालारजस्तीतु-प्रस्वितस्मादमें॥

शिशिक्रमकुशकाष्ठ-मामलाभिःश्रवः॥

पाणि भोजे प्रदातव्यं सर्वस्तुरु च मायवा॥

प्रमेहनू विशेषत्वेव सुङ्गाचातास्माद्यमरोऽः॥

कः सुदारकाव्यं हयात्तिरन्त्रस्यायमः॥

महानविध्र गृहि ज्वरस्विध्र तथा॥

कामला पापुरोगांश्च श्वीमकमशास्मी॥

झोपद्व विशेषत मूलनानिन नन्दिति॥

प्रदातापुरोवासौ सबौरोगां परम॥

दापिमाद्यायेद नाम चतिभाग्यं निर्भिःतं सहू॥

THE AŚVINI KUMARA
30. Śatāvarī Ghṛta.

शतावरीग्ह्रतम्।
शतावरीमूलकि ब्रह्मक्षेत्रपति बिनाग्यस्य।
पद्माघातश्च चतुर्दशं बिचक्षेत्रस्य।
जीवनीयानि स्वाच्छिखा राजा मोहुर्कं तथा।
शतपुष्पा च चत्त परम सुपीवेयम्।
चन्द्र तमगे सांसी प्रकारं रघुचन्द्रस्य।
पूर्व स भागे स्या बिनें भागव्युपलम्।
एकत्रस्यमेक्यांचे चीरे दयात्पतुवायम्।
हंकण्य वातापिषाच चतर्ग्राहारपणम्।
पद्माणि गुडसरपणातिद्वानां च शस्ति।
पूंशिपातिनां नृर्यां बम्यां चैत योजितम्।
चतुष्कांकरं छी तद्भवात्रोऽधिकारकम्।
शतावरीचित्तमदस्त्रिभा परिवीत्तम्।

31. Hīṅgavādyā Powder.

हीङ्गवाद्यं प्रोक्तम्।
हीङ्गवाद्यं वृक्षम्।
हीङ्गवाद्यमिथकार्यकार्यान्त्यक्षमित्यपादः। सठी
इच्छां वसशर्यं विचक्षेत्रं भारयं दानिंद्वम्।
पाद्यपुष्पचतस्याष्ट्रपुष्पान्त्रायामः। हंते
चौर्यं भावितंतदायकसि स्वार्थवारुरुय च।
भाधानयथविकार्युदानानु गुञ्जाक्तदर्तस्यान्
प्रायुपायानदौदशारस्तिक्षणां वृहोभावितोऽर्थान्।
जम्भोभावितम् च नवमी वाधिक्षरोऽतिलिकः
प्रायीलिपि यस्मान प्रकपष्टिस्मात्षाचलानि।
कुक्कुक्कुककटोषतारवरेषु
वस्मलानायस्यक्षेत्रे च पार्थीययो।
यशानि नापयति धात्तावाचार्यानि
हीङ्गवाद्यमिथकार्यकार्यसंहितायाम्।
32. Daśāṅga Oil.

33. Vṛhat Agnimukha Powder.
34. Citraka-Haritaki Avaleha.

वित्तकार्तीकार्यविशेषः

वित्तकार्तिकार्यविशेषः तथा गुड़स्वासे च सुरसासे च ||
संकेतम् गुड़स्वामः च वित्तकार्तिकार्यविशेषः
ततोआवश्यकौत्तममेवविवचारः पत्राः
कवचाराचमं वधाप्रः पथास्त्रुशीवः
35. **Haritaki Avaleha.**

(This formula has been quoted in page 110.)

**Haritaki Avaleha II.**

(Reader's note: The text appears to be in Tamil, but the content is not clearly legible due to the quality of the image. The text seems to be a medical or pharmacological recipe, possibly from an ancient Indian text.)

[Elaborate discussion on the ingredients and preparation method based on the text, if possible, would be beneficial here.]
36. Citraka Avaleha.

चिरकावलेहः।
बंधिणियम्यूङ्गाल कावे पञ्चमखे॥
श्यतत्वः रसकै रूतिंभिग्नमवायमतम्॥
पञ्चमेः,ठुलां तावदावदापाकलवशम।
वनदुश्चन सुपुर्णः सुशीतः कुडव्यवम॥
विद्यम्युम सिगमत्व विकटोष पञ्चमवम्॥
पर्यंत्य स्मायनारः ग्रिकाणितसायने।
उपमं कथितं पुरामविमवस्यवधे॥
जीवन्वपि च काथानि कामवासवयुक्तीन्॥
गुणीदरायाः कुण्ड च जनीकृते संगद्याः॥
गोमधेकपशां सान्यासितं पानसम्॥

37. Svalpa KadaliKanda Ghrta.

धनकदलिकन्त।
कदलीकन्द निध्यंति तप्तस्मु तुलां पञ्चमेः।
तन पादाविशेषं वापुर्णत यवलः॥
लक्ष्णं कदलीं दृंवकां पाणिकालया।
रजसी चन्द्राकाण्डी नागरं तिलाला कथा।॥
दाङ्गशङ्का च सीलानि यंतानि धामकान्तः।
हनाशभक्तं दाइशविधश्रमस्थितः॥
कल्पर्वशेषेन झुंगप्रस्थं विपाच्येत॥
पानसीं द्रातायं सुन्द्र घटमाचया॥
प्रेमशास्ति क्षेत्रीय दाय मोष सूष्या चाचा।
विवहानगायुलं वामानवरायणसः॥
वातरीयं विस्मित्याय हविन्द्रायनिवधा॥
कदलीकन्दं नाम पञ्चिकाः निमित्तः पुरा॥७६॥

* 'पञ्चमेः' वर्तिः।
THE ĀSVINI KUMARA

38. Ayopati Rasa.

अयोपाति रस:।

चिरता संवेभावानि सवे सवे च शरवरा॥

इत्योदकादुपात्मनि रक्तास्रिणी रसः भूतः।

अयोपातिको नाम अख्रीदयनिनित्तम्॥


मारटण्डा रस:।

षुष्मूलद्रयं वेपि तिलापितिनसुव्यवस्॥

मार्तण्डयत्तिरांगां मुलवीमिर्चि तथा॥

युक्तिमल्लमुलमिर्चि तथा॥

शाबची आदिकं वेपि ओरकं चर्चं सुव्यवस्॥

पेन्डी वचस्युलिन भर्तयं हितमीवि च॥

भशर्शेपकाण्डो सब्द्यानो व्याप्सिति।

मारटण्डसनायमप्रिनिद्वितिनित्तम्॥

40. Vāla Sūryodaya.

वालशुरिद्य:।

भिषिराजस्थत्ति नारि वैश्वरससंमस॥

वार्षान्न गम्बकाठं तदर्थः कार्यीरकम्॥

मु द्वृत्तरथ्ये कुमारोपसामेव च।

अबीराभो न प्रथेरति मह्दििं च दिनि दिनि॥

सुधा निचिपेद्वन वालकायलापितम्।

गुज्जामाथपशोरीं विषनिम्नकुष्ठकम्॥

सुखकृति सत्त्वाणि हादश्य चयंबीेंच।

* * *

वालशुरिद्य नाम अख्रीदयनिनित्तम्।
CHAPTER IV

KAŚYAPA

Kaśyapa's father was the sage Māricē and his mother Kalā. He married the seventeen daughters of Dakṣa, and became the progenitor of all living beings:

Name of wife.  Sons.
1. Aḍīti  Devas (Gods)
2. Diti  Daityas (Asuras)
3. Danu  Dānavas (Demons)
4. Kāśṭhā  Aśvas (Horses)
5. Ariṣṭā  Gandharvas
6. Suraśā  Rākṣasās
7. Ilā  Vṛkṣa (Trees)
8. Muni  Apsaras
9. Krodhavasā  Sarpas (Snakes)
10. Tāmrā  Syena, Gr̥dhras (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."

In Aṣṭāṅga Ṣrdaya Saṃhitā VI. ii, he is called Vṛddha Kaśyapa or Kaśyapa 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 Kaśyapa 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 Kaśyapa and Kaśyapa are the names of the same rṣhi; but in Caraka Saṃhitā, I. i. both the sages are separately mentioned and we find Kaśyapa quoted in Caraka Saṃhitā, IV. vi and Aṣṭāṅga Ṣrdaya Saṃhitā, VI. ii and VI. iii (see footnote) Bower Ms., p. 170).

Formulæ: The following formulæ are ascribed to Kaśyapa.

1.

समक्र-चातकरी-लीहृ-कुटस्त-व्याहुः ।
सहारस-चुंदरस-चुंदविलकामुभि: ॥
बहाराहितोलकैति सांदिवे: सांधिं मुदमु ।
धीरभ्रमस्य एकि शायें दलीवीवान् ।
विविधानाम्यानेतद दक्कम्पपनिविंतम् ॥

Aṣṭāṅga Ṣrdaya Saṃhitā, VI. ii, p. 28, v. 42.
2. **Dasāṅga Dhupa.**

दशाङ्ग धुपम्।

वच्चा-छिमा-विश्वासम सैन्धवं गजपिफली।

पाठ प्रतिविषा क्षोधे दशाङ्ग कथ्यापदितः॥

*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 Kāśyapa and is the founder of the clan (वैवर्त) which still bears his name. According to Trikāṇḍaśeṣa, Kāśyapa is the name of sage Kaṇḍa, 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.

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.

He is quoted in the Nivandha Samgraha, Vyākhyā Kusumāvalī, Vākhya Madhukoṣa, and the Bower Ms.

Kāśyapa in Nivandha Samgraha.

1. न भृत-धातु-सभात्मकांसा साप्तन करण ।
   दृष्योक्तरां वाय दहीवा भिषगासिन ॥

2. भराजनां यदा मारी श्रीरोत्रा वजीरती ।
   अथवाऽकाः मेवेलू प्रीतिलाम्बिते कुम्भलसदुति ॥

Kāśyapa in Vākhya Kusumāvali.

1. नाथोदिति न चायथमाराक न च पष्टि ।
   स कोरकोलस्वसमर्पिण चोलसकः स्वरत ।
   यदि वायस्के दीर्घायुवितार्जिता ।
   कारकायत्वपलाते श्रीतः संबरोधः ।
   तिरिवाखलसतु सम्भा दंशवलसक्षयिन ैसः ।
   स दंशवलसक्षयः श्रीद्रः त्रेषि विधात्करः ॥

2. विरोध्योपवृत्तीकरविविद्या चायथः पण्डितः ।
   वायपि: संपितः प्रस्तः विचारं चतुरस्त्र च ।
   तत्तपानान्तरकास्मि श्रीदन्तात्मः वा वदन्त ॥

Vṛddha Kāśyapa

3. See 2, Ni. S.
4. वर्माकामनै दर्श न समक्त परिपमत ।
Kāśyapa in Vākhya Madhukośa.

1. संयोगज्ञ विविधं वर्त्तीं विषमुच्यते ।
   गर: स्मारकिल्लवं सुविस्व गुहिसं मनस्।
   Vṛddha Kāśyapa.

Kāśyapa in Bower Ms., vv. 1010-1040.

1. सृष्टा गुड़कामिकां कुमाराय प्रदापयेत्।
2. अतिसरिषु बालान्तु गुड़कां दापीवीरिक।
   तवुल्लुकारकांसुकां चीत्रेश संह दापयेत्।
   पश्चाक संपीयः शंक राजीदलितुयातम।
3. कहत्यानसा बालान्तु गुड़कां दापीवीरिक।
   गुड़कां चरसुद्दाकां शंक राजीदलितुयातम।
   भयवा पक्षीश्चन भवाद्विन प्रदापयेत।
   शंक राजीदलितुयां तथा सम्पदीय उक्ते।
4. रजातिष्ठः बालान्तु गुड़कां दापीवीरिक।
   पञ्चाबलःकाविष्ठ तवुल्लुकामास रसेन वा।
   शंक राजीदलितुयां शाङ्गु सुविरिक वा।
   चीत्रकाराभां वा रसम्पूभिते।
5. उदायांचु बालान्तु गुड़कां दापीवीरिक।
   गुड़ीदलित संपुक्ता विफलाय रसेन वा।
6. भास्तिष्ठः बालान्तु गुड़कां दापीवीरिक।
   दर्शामलित संपुक्ता सुविरिकारण वा।
7. शंक राजाभारी चेत सृष्टाक्षिण प्रसेहिरु।
   गुड़कां दापीवीरसः सर्वान्त्र मस्तथा।
   चालिम्बरुसुजातिन बालान्तु दापीवीरिक।
   सृष्टा महतत तेनायथ कामरुपसः वचो यथा।
8. जविजातेषु रोगिषु गुड़िकां दापवेदिष्कः
सुखीद्वीन संयुक्ता संबङ्गिद्विनामाः
समीत्य कुशलो चेदा: कुर्वऽत विविधः कियोः।
विद्यालय वालानाधीनः कालं समीत्य च।
किष्यं पावित्रं चेदो धाबीयामापवादित्
विद्यालयं वालं च तथावायोजनं।

9. परिक्रियकार्त वालानां गुड़िकां दापवेदिष्कः
वराहविजङ्ग संयुक्ता तथुताधवनः।
शकं रोचङ्गसंयुक्ता पावित्रं चिकित्सकः।
सुखी भवति तां पोला कामापर्व वदे।

10. खिङ्कार्यतेषु कार्यो गुड़िकां दापवेदिष्कः
मातुखीन संयुक्तां गन्साद्वशेषैन वा।

11. जनुचिभिधमानां गुड़िकां दापवेदिष्कः
दाहिनोदसंयुक्तां सधुनां प्रक्षङ्गदा।
यथा शिरोविद्वितं लेखामामापवादित।
भूख्यता भोजनं चेता यवागुरुङ्गभोजनम्।

12. कामालपालुः व्रतचुः तथैव च।
तुः पिलुश्यावेश गुड़िकां दापवेदिष्कः।

13. रोहिण्यें तालुः वा गलाकृपस्यतिः
चुरितमें गुड़िकां दर्शान्मां च पीढ़ेतुः।
सुखेन दलता जावरे ाशयण्योपाध्यायत।
तेनासा रोगाः शास्त्रसे ारोग्यवाहिष्णुता।
14. तद्रूपकसंस्कारानां पामांशं विषर्चिके।
लगतेवं व रोशने गुड़कां दापवेदिष्कके।
कामीवल्क चूणांति चूणानि गुड़कावादाय।
पिष्या सर्वपर्वेतन तेनेमयमुक्तपयेत।
नीवैसे सुखोशेन खादिरेण रसनव व।
केश निष्कवाकावेशेन तेन सम्पद्यते सुखी।

15. कायम वा पृतना वापि यष्ट बाल्युपरिश्रवः।
वक्षसुलेख संदीवभ गुड़कां तथा दापवेद्यः।
अथवा कल्लप्यानां गुड़कावां प्रत्येकवेदः।
तथा सर्वेदाकाश्य प्रशामणिन सुदास्यः।

16. पार्वतयङ्गः वालानां गुड़कां दापवेदिष्कक।
कुल्लप्यानां गुड़कां वृः सांसर्कशेन वा।
भावः। उदकशीरायै। दीपः। शास्मिनिः द्रास्यः।
वाले वर्षेण वालायां चिरं सत्यप्रजाति।
कामारिष्या गुड़िका॥

The following formulae are attributed to Kāśyapa:—

1. Dasāṅgamagada:—

वचाकान्तविवक्षानिः कैव्यवं गजविषयः।
पाठा प्रतिविया व्योम कामारिष्ण विनिर्मितः।
नासातकावे रीवा सर्वेक्षीतविवं अविद्यः॥


वेण्णलं दुःकम्॥

विकाण्ड दूषणं द्राचा सधुवं कश्वरिष्ण।
प्रवीणविन्त सुप्रौढः विषं मकक्षेराम॥
नीकोतप्लं शारिरः वे पदमः रज्ञीस्वयम्।
कार्यमेकः पथयां निग्रां विफलारसम॥
Books:—

1. Kāśyapa Tantra: This work is quoted in Nivandha Saṁgraha, vi-xxvii. काश्यपादित्वाचार्यवृत्तिकाः च सिद्धार्थवृत्तिकाः च निराकारवृत्तिकाः. 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. काश्यपीयरोगनिदानम.

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:

िन्मशिर्य भाषिनिदानम—

पिचरलं च गीतं च शेलोद्दमं च शेषकाम्

...... दृष्टि घं दृष्टि घं विषपुलकाम

काठि चां प्रायंश्रीप्रमु चोरारं दृष्टि पिकिक विधा

दृष्टि विन्नं सार्द्धं च तनुश्रीं च च घुर्णकाम

* * * * *
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 Kāśyapa Samhitā.

Kāśyapa Saruḥitā: Ms.: Burnell Catalogue of Tanjore Mss., No. XLI, p. 70.
“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 Rgveda Soma is the juice of a milky climbing plant \textit{(Asclepias acida)} extracted and fermented to form a beverage, liked by the gods and priests. There are many hymns (Ninth mandala) 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 Rgveda; and Atharva Veda), which was hence called Oṣadhi-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 (\textit{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 \textit{Acido Asclepias}. Some consider it to be \textit{Semilia Genia}, while others think it to be \textit{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, 48, 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.
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, f.) 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 Rṣbhus 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. i. 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 am\textit{r}ita, the "immortal" draught (allied to the Greek \textit{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 \textit{Avesta} with the \textit{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.
\(^3\) Chips from German Workshop Vol. I.
M. Blavatsky remarks: "Plainly speaking Som 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".

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 Śurya, 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 rṣi (viii, 68, 1), strong, skilful, omniscient, prolific and glorious (i, 91, 2). He is the priest of gods, leader of poets, a rṣi 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, 30, 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 (Tatt. Sam., ii, 3, 5) as a punishment. In the Tatt. 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 Rgveda, Parjanya, the rain-god, is described as his father and the waters as his

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 Brhaśpati; and so a quarrel arose. Brāhmaṇa 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 hymus 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 Veṣa 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 Suklapākṣa, 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; 167, 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 (= Kalaśa) (ix, 86, 9; 99, 33), and comes out of it again (ix, 25, 6; 71, 2; 79, 9). Kalaśa is mentioned in ix, 43, 3; 62, 19; 63, 13, 23). By Kalaśa, Yāksa understands कब्जा श्रेष्ठचिन्म: the receptacle of Soma. Kalaśa 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 Kalaśa (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 Kalaśa 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, 56, 45). Soma “lights up dark nights and is the day’s banner” (vi, 39, 3). The ancient Rṣis 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, 3), 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 sieve, 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 Rgveda 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

xi, 1, 3, 2

{ The king Soma, who is the Moon, is

1, 3, 4, 5

the food of the gods.

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, Soma is the Moon.

xii, 1, 1, 2: Soma is the Moon.

Viṣṇu Purāṇa: Bk. 1, Ch. 2: Brahmā 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 Rgveda 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 iō, 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 Vṛtraghān, 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 desease that has entired 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 Vanaspati, or "lord of forest." In the Rgveda 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."


In another hymn i. 91:


And again i. 120:


In the Rgveda 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 manādalas.
SOMA

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: Soma stimulates 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 Rṣi.

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 Soma.

175, }

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 Apsārasa (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 Brabhavaivarta 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.

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