

## Ayurveda: Origins and Evolution

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### Abstract

*Quest for good health and long life is probably as old as human existence itself. Human beings have always believed that they are entitled to die of old age rather than disease. Towards this goal they have striven at spiritual as well as material level. Evil spirits were sought to be driven off through charms, incantation and magic, with appeal made to the Creator to be the Saviour and Healer also. At the same time, recourse was taken to medication also. The premise that disease has a cause and efforts need to be made to remove it eventually led to the establishment of a health care system.*

The beginnings of medical science in India are contained in the Vedic literature itself. The Rgveda describes the Asvins, Varuna and Rudra as bhisaj, physicians (Macdonell & Keith 1912 II:104). By bhesaj is meant "remedy", incorporating charms, magic, incantation, etc. This concept goes back to the era of Indo-Iranian commonality because equivalent terms occur in the Avestan literature as well: manthra baesaza [mantra bhesaj] and haoma baesazyā [soma bhesajya] (Bloomfield 1899:58). At the same time, the Vedic literature is familiar with osadhi, that is plants with medicinal properties. As time progressed, the domain of osadhi expanded at the expense of bhesaj, and osadhi itself transcended plants. The discipline of Ayurveda was born as an affiliate of the Atharvaveda.

Made up of two Sanskrit words Ayuh (life) and Veda (knowledge), Ayurveda can be defined as an ancient Indian health care system, comprising both practice and theory, and devoted to a systematized quest for a long, healthy, vigorous and happy life. It comprises two distinct traditions: botanical and the metallurgical ("rasa"). The botanical is the older. The metallurgical with emphasis on mercury constitutes the Siddha system.

That these two streams have always been perceived as distinct can be seen from the fact that they are linked to different divinities: the botanical to the Asvins and Indra, and the metallurgical to Rudra/Siva (Ramachandra Rao 1985 I:62,80). There are eight divisions (anga) in Ayurveda: salya-tantra (surgery); salakya-tantra (diseases of head and neck); kaya-cikitsa (general medicine); bhuta-vidya (dealing with evil spirits, etc.); kaumara-bhrtiya (paediatrics); agada-tantra (toxicology); rasayana-tantra; and vajikarana-tantra (dealing with aphrodisiacs, etc.). There is a vast literature on Ayurveda, but the oldest and most authoritative is the Vedic literature.

time. To be able to critically examine the issues pertaining to the origins and evolution of Ayurveda, we must first review the nature, content and limitations of the extant source material. Here, our emphasis will be on the botanical Ayurveda.

### Source Material

The Vedic texts because of their sanctity were preserved in their original form. In the case of the Puranas and the epics, additions were made but not deletions. In contrast, scientific texts such as dealing in healthcare and astronomy generally underwent both deletion and addition. All the well known historical limitations of an oral tradition apply to Ayurveda also. Once an influential text appeared on the scene, contributing and lesser texts were forgotten. We learn about their existence from stray references in survived texts. As befit a field science, Ayurvedic classics were often redacted. We know only about the final or the latest recension. There is often confusion about names. It is not always possible to distinguish between persons of the same name but belonging to different eras. Many names remain shadowy, even though in their own time they would have been held in high esteem. Lesser authors are known to name their work after past celebrities so as to enhance their own work.

Chronology remains a serious problem made worse by non-rigorous research's passing off wild guesses as firm dates. It should always be borne in mind that in most cases, it is not possible to assign any date to an author or a text. In some cases, because of reference in texts or authors whose dates are independently known, useful time brackets can be assigned. Some times reference in dated literature from outside India gives a firm upper time limit. In short, it is not possible to construct a connected evolutionary history of Ayurveda.

### Influential Texts

The two basic texts are Caraka-samhita, dealing with inner medicine or therapeutics (kaya-cikitsa), and Susruta-samhita, dedicated to surgery (salya). We discuss below these and other major Ayurvedic texts. They all essentially deal with botanical Ayurveda. Use of metals as medication along with the philosophy thereof constitutes a special tradition with its own literature.



Caraka-samhita, Susruta-samhita and Vagbhata's Astanga-samgraha (5<sup>th</sup> century CE) have been termed Ayurveda's great triad (brihat-trayi) or ancient triad (vrddha-trayi), while three later texts, Madhava-nidana (7<sup>th</sup>/8<sup>th</sup> cent. CE), Sarngadhara-samhita (CE 1226) and Bhava-prakasa (16<sup>th</sup> cent. CE) have been called the three minor classics (laghu-trayi). In the following we review some of the influential Ayurvedic texts.

**Caraka-samhita** (?-? cent. CE). Atreya (son or descendent of Atri) is mentioned as a pioneer in medicine, and Dhanvantari in surgery. Assumed historical, both are of great but uncertain antiquity. Six pupils of Atreya are named: Agnivesa, Jatukarna, Bhela (also spelt Bheda), Harita, Ksirapani (or Ksarapani) and Parasara. All of them are believed to have composed their own texts based on their Guru's teachings, but only two have reached us. Bhela-samhita became a dead end, but it is historically valuable because it remains in its original form, unlike Agnivesa-tantra which led to greater things, but lost its own identity in the process. It was redacted by Caraka who, on the basis of his widely accepted association with Kanishka, can be placed in second century CE.

Even Caraka's work did not survive in its original form. With time, one third of it was lost and the remainder became inadequate. The missing parts were supplied and the whole redacted by Drdhabala, an inhabitant of Panchanadapura, in Kashmir, at the confluence of Indus and Jhelum, identified with present-day Panjor or Panchpanor (Ramachandra Rao 1985 I:56). Unfortunately, he cannot be dated with any certainty, except that he cannot be earlier than 4<sup>th</sup> century CE (See Navanitaka, below). It is his edition that we now know as Caraka-samhita.

**Susruta-samhita** (?-2 cent. CE). The surgery classic Susruta-samhita follows the same broad pattern as the Caraka-samhita, in the sense that it is also three-layered, but less details are known. The original text was codified by Susruta, of great but uncertain antiquity, on the basis of teachings of Dhanvantari. Devoted exclusively to surgery, it carried the name Sausruta-tantra. Later, a supplement was added with the tell tale title Uttar-tantra (later treatise), "which treated all subjects unnoticed" by the main text, no doubt to make the text self-contained. To give the whole text an appearance of thematic unity, the anonymous author of Uttar-tantra has also been dubbed Susruta (so that we have Susruta I and Susruta II). The whole text was redacted by Nagarjuna under the present-day title Susruta-samhita. From the extant text it is not possible to isolate the original Sausruta-tantra from the extant Susruta-samhita. It has been suggested [by Dalhan see below] that Nagarjuna

himself is Susruta II. Nagarjuna is very likely the great Mahayana master and alchemist, who is associated with King Kanishka, and therefore placed in first/second century CE (Ramachandra Rao 1985 I:95). (There are later persons with the same name also). It has even been suggested that as with Caraka, Susruta (meaning famous) should be seen as a personification rather than a person. It thus appears that the final version of Susruta-samhita and the Caraka redaction of Caraka-samhita came into being at about the same time, of Kanishka.

**Navanitaka, Bower manuscript** (4<sup>th</sup> cent. CE). Authentic written information on where Indian medicine stood in fourth century CE comes from an unexpected source, a birch-bark manuscript from Kucha (also called Kuchar) in eastern Turkistan, on an ancient silk route. (Kucha is now the seat of a county in the Aksu prefecture, Xinjiang, China). Buddhism was introduced in Kucha in first century CE and by the third/fourth century CE it was a major Buddhist centre with numerous monasteries.

An important part of the Bower manuscript, so-called after its purchaser, Lieut. Hamilton Bower, is the digest called Navnitaka ("cream churned from curd"), which lists useful medical formulae culled from the then available sources. The digest is merely a copy, probably second hand, of a still older original. On paleographical grounds the manuscript has been dated about CE 350. Its contents must be somewhat earlier.

The listed formulae span a wide range: from hair wash and medicated oils to treatment of childless women. Interestingly, no source is cited in many cases: they mostly turn out to be standard treatises which presumably were expected to be well-known. A comparative study reveals that twenty-nine formulae are copied from the pre-Drdhabala portion of Caraka-samhita, suggesting that his own redaction was still in the future. Another fifteen come from Bhela-samhita. Three more formulae, dealing with atisara (diarrhea), are taken verbatim from Bhela-samhita. These three figure in Susruta-samhita's Uttar-tantra also, but in a different wording. We thus learn that Bhela was a source for Uttar-tantra. The older part of Susruta-samhita lends three formulae.

In case of some of the formulae, however, the authors are named. To the extent they can be identified, they are from the archives (Atreya and his four lesser pupils and others like Jivaka and Dhanvantari). As befits a scientific work, latest scholarship was considered more important than old masters.



**Astanga-samgraha** (6<sup>th</sup> cent. CE). The two classics, the Caraka and the Susruta, “are to an extent rambling and discursive” (Ramachandra Rao 1985 I:24). Their essential details have been “neatly collected” in the voluminous and comprehensive medical treatise Astanga-samgraha, prepared by Vagbhata, who is probably also the author of Astanga-hrdya-samhita, based on the former. (Like the astronomer Aryabhata, Vagbhata also has a single 't' in his name). Astanga-samgraha is the first medical text to incorporate astrological concepts. It is claimed that diseases which originate during different stellar (nakshatra) conjunctions follow different courses. One wonders if Vagbhata's source on matters astrological was Varahamihira (6<sup>th</sup> cent. CE), because Varahamihira quotes a verse on rasayana from Astanga-samhita (Rama Rao 1992:216). This would suggest that Vagbhata was a contemporary of Varahamihira and therefore lived in the sixth century CE. This date would be broadly consistent with the well known fact that the Chinese Buddhist monk I-tsing who was in India during CE 673-685 seems to implicitly refer to Astanga-samgraha.

**Madhava-nidana** (7<sup>th</sup>/8<sup>th</sup> cent. CE). An outstanding work on diagnosis of diseases has been Rogviniscaya (or Rug-viniscaya) authored by Madhava-kara, a native of Silahrada in Bengal and placed in the seventh/eighth century CE. The work is better known after him as Madhava-nidana. Madhava draws heavily on Caraka-samhita, Susruta-samhita, Astanga-hrdya-samhita and to a lesser degree on others including Astanga-samgraha. Some parts seem to have been Madhava's own contribution unless they are borrowed from texts no more extant. All matter has been integrated and arranged in a coherent and systematic manner. No wonder then that Madhava-nidana itself has been the subject of a large number of commentaries (Meulenbeld 1992:243-246). It has continued to be “an indispensable aid to physicians for over a thousand years”. With Vagbhata and Madhava-kara, “Ayurveda became highly systematized, its pharmacopoeia expanded, and treatment procedures got refined” (Ramachandra Rao 1985 I:9). Madhava-nidana was translated into Arabic during the 9th century and into Italian in 1913-14.

**Ayurveda-dipika** (11<sup>th</sup> cent. CE). An influential commentary on Caraka-samhita, “widely relied upon by Indian physicians” is Caraka-tatparya-tika, better known as Ayurveda-dipika, composed by Cakrapanidatta (11<sup>th</sup> century CE), a native of Bengal. The Caraka we know is the Caraka constructed by Drdhabala and Cakrapanidatta. The latter also wrote an incomplete commentary on Susruta-samhita, called Bhanumati.

**Nibandha-samgraha** (12<sup>th</sup> cent. CE). The most celebrated commentary on Susruta-samhita, called Nibandha-samgraha, was composed by Dalhana (also spelt Dallana), who lived in 12<sup>th</sup> century CE, at a place called Ankola near Mathura. Dalhana was a practising physician, who travelled extensively to acquaint himself with popular knowledge about plants and details of their medicinal use. He incorporated local health care knowledge into formal texts by Sanskritizing many local plant names. In addition, he was a widely-read scholar. His justly famous commentary provides a wealth of other information as well.

**Sarngadhara-samhita** (CE 1226). A “short but solid text-book” is Sarngadhara-samhita, composed in CE 1226 by Sarngadhara. Prescriptions are copied from earlier works, but diseases are dealt with more elaborately. Pulse examination (nadi-pariksha) for diagnostic purposes appears here for the first time. “This is the oldest work in which calcinations and similar metallurgical techniques are dealt with.”

**Bhava-prakasa** (16<sup>th</sup> cent. CE). The most famous of the later texts is Bhava Misra's Bhava-prakasa, the oldest manuscript of which (now in Tübingen) is dated CE 1558. The text “repeats earlier accounts and formulae” but also adds new diseases and cures. Small pox (masurika) is described as “possession by the goddess Sitala”, and an invocation to her included among the remedies. Notably, it is the first Indian text to describe syphilis, which is called phiranga (“foreigner”), and attributed to physical contact with the Portuguese.

Bhava-prakasa has a celebrated pharmacological supplement, called Bhava-prakasa-nighantu. It describes drugs (herbs, metals, foodstuffs, honey, etc.). It mentions use of Chopachini (dvipantara-vacha) to cure syphilis (firanga-roga).

## Materia Medica

While the theoretical framework of Ayurveda has remained more or less the same, the knowledge about drugs has expanded. New things were learnt about old drugs, and incorporated into the texts by coinage of new terms and synonyms. Iksuraka was dubbed Kokilaksaka to denote “the colour and shape of seeds (Raghunathan & Dube:393). Kunkuma had been called Bahlika after its source of supply. Vagbhata called it Kasmiraja, to convey the important information that it grew in Kashmir also.

It was a common practice to prepare a drug directory-cum-handbook as an aid to the physician. When prepared as a stand-alone, it was called Nighantu, the term being borrowed from the Vedic literature.

The Vedic corpus names about 260 herbs (Kautilya's Artha-sastra 330). The number increases to 385 in Susruta-samhita and to 500 in Caraka-samhita. The celebrated Bhava-prakasa-nighantu (16<sup>th</sup> century, referred to above) provides information on about 500 plant products of which about 400 are of actual drug value. There have been more recent compilations as well. Most of the physicians work with about 600 Ayurvedic drugs (Ramachandra Rao 1985 :75).

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