CHAPTER 2

ORIGIN AND DEVELOPMENT OF ĀYURVEDA
It is already mentioned that the Indian soil has been much fertile for numerous scientific and medicinal systems to thrive on. Surprising advancement has been made in the field of Āyurveda even in ancient times. But it is very difficult to figure out the antique stage and development of Āyurveda in India. According to Indian mythology, Āyurveda is of divine origin from Brahmā, who later on transmitted this knowledge to Aśvins and they taught it to Indra. Indra then taught this to Bharadvāja and Dhanvantari. They transmitted the divine knowledge to Ātreyapunarvasu and Suśruta, who were responsible for the two streams of Āyurveda, viz., medicine and surgery respectively. Such a conventional belief need not be taken authentic, for it only indicates the great antiquity of Indian medical system.

Usually the study of the history of Āyurveda is undertaken resorting to the details available in the Āyurvedic scriptures. These scriptures trace the roots of Āyurveda to the Veda-s. There are some legends which seek to establish relationship between Āyurvedic and Vedic tradition. In addition to them there is a tendency among scholars to establish that origin of any knowledge can be traced back to Veda-s. Often it is done purposefully with a view to prove authenticity of a given system. Accordingly scholars have attempted to trace the origin of
Ayurveda also to the Vedas, with special allegiance to Atharvaveda (AV). And hence it is usual to consider that Ayurveda as a upaveda of AV. The germs of medical system can be traced to in Vedas, as we find plenty of references on medicines, drugs and methods of treatment.

References to Medicinal Concepts and Ideas in the Vedas

Vedas are the most ancient sources of human knowledge that are available today as preserved in literary form. They are considered to be the primary source to trace the history of the primitive stages of Indian medicine.

Dr. V. W. Karambelkar, in his work The Atharva-veda and the Ṭyur-veda', opines that all the eight branches of Ayurveda find considerable scope in the hymns of Atharvaveda. In fact the AV does not mention the eight branches of Ayurveda by name. Besides it, detailed account of nidāna, śārīra, cikitsā and kalpa were also not clearly made in the Vedic Samhitas. But some hints at archaic medical concepts can be found throughout AV. In addition to it the other three Vedas and some of Vedic literature also shed some light on the subject. Some of such direct evidences are as following:
The causes of disease were largely unknown to the Vedic people, and hence, the evil spirits, black magic, witchcraft, malevolent deities and sorcery gained importance in their imagination. They believed that the hereditary diseases are caused by sins committed in the past lifetime by the patient himself or his ancestors. They also believed that a particular demon caused a particular disease. Another notable fact is that the disease itself was looked upon as a demon. So, the Vedic people believed that to ward off such malevolent beings an elaborate religious ritual is the only remedy. So, they sought the therapeutical and magical remedies to expel the demonic influences. Amulets also had been vogue. According to AV, they act as a weapon or an instrument, which protect someone who wears it from misfortune and disease.

The Vedic people also held the belief that the Vedic Gods occasionally play the role of physicians and provide remedies. Rudra is considered as the first and the best among the physicians. Rudra's prescription of medicines is also mentioned in the Veda-s. It is also said that the God Rudra deliberately caused disease on certain individuals. He was also believed to be the preceptor of the healing herbs. Later on Caraka, the author of classical work CN, also followed the same line of
thought that the mythical origin of jvara\(^7\) as well as its treatment are related to Lord Rudra.\(^8\)

Besides Rudra, the Vedas attribute medicinal powers to Gods like Indra, Maruts, Agni, Varuṇa and Sūrya. Many Vedic hymns refer to Aśvins, the first ever divine physicians\(^5\), who excelled in both medicine and surgery. There are references to surgeries performed by Aśvins in Rgveda (R\(^V\)). They are said to have restored the lost eyesight for Rjṛśva,\(^6\) made a head-transplantation for Dadhīci,\(^1\) They also gave a bronze leg to a hero who had lost his leg in battle,\(^2\) Aśvins possessed the skill of joining the broken bones as well.\(^3\) They cured lameness and leprosy.\(^4\) They were familiar with rejuvenation therapy too. They helped Cyavana regain his youth.\(^5\) All these show that the Aśvins had done some extra ordinary surgical skills. Naturally it is impossible to transplant the head and rejuvenate an old man into a young. It can be taken as mere imagination of primitives. Any way, it shows that in the Vedic period the surgery were quite advanced. Suśruta, perhaps, might have developed the surgery in the later period resorting to the methods given in the Veda-s.

The descriptions of an ideal physician are also found in Veda-s. According to R\(^V\) the physician should be a scholar, well-versed in herbs
as well as their properties and should know how medicines act on human body. He should be able to eradicate rakṣas and diseases.

यज्ञीये समस्मत राजानां समिताविषन्।

विव्रः स उच्यते भिषिक्षोहलामीवधतना।।

(X. 97. 6)

It also seems that the physician must be capable of even engaging patients into both daivavyapāśraya and yuktivyapāśraya types of treatments.¹⁶

The people of Vedic age might have recognized that the plants possess curative properties, which can be used to treat various diseases. There are descriptions of 67 medicinal plants in the RV, at least 81 medicinal plants in Yajurveda and 290 herbs are mentioned in the AV. In addition to this, more than 130 herbal plants are described in Brāhmaṇa literature.¹⁷ The Oṣadhisūkta of RV is the earliest references to ancient herbal plants and plant science.¹⁸ The soma plant was noted principally for its religious and medicinal properties.¹⁵ Various other medicinal plants such as jaṅgiḍā,²⁰ pippati,²¹ apāmārga,²² lākṣā,²³ kuṣṭhā,²⁴ prasnaaparnī,²⁵ rohiṇī,²⁶ gulgulu,²⁷ śatāvara,²⁸ arundhati,²⁹ arjuna,³⁰ etc., are mentioned in the Veda-s. Their therapeutic properties also found described at times.

The Veda-s also provide some vague pictures of human physiology and anatomy.³¹ References are made to various inner organs like hrdaya
(heart), klóma (lungs), ḫalíkṣṇa (gall-bladder), matasñā (kidney), yakna (liver), plīhna (spleen), ātra (stomach), guḍha (rectum), udara (abdomen), plāśi (colon), nābhī (umbilicus), dhāmanī (arteries), etc., and bones like pāyāṇī (heels), gulphau (ankles-bone), uccalāṇkhau (bones of the hands and feet), pratiṣṭhā (base), astivanta (knee-cap), jānunōḥ sandhiḥ (knee-joints), jaṅgha (shanks), śrōṇi (pelvic cavity), ūru (thigh-bones), kaphodau (shoulder-blade) etc. The Veda-s used the word hīra or sirā in the sense of a dhāmanī. It accounts for the primitive awareness about the arterial system of human body. The structure of inner organs was known to the Vedic people after they began to dissect animals for sacrifices.

AV mentions more than hundred types of both the internal and external diseases, linked with their symptoms, such as - takman (fever), jalodara (dropsy), kilāsa (white leprosy), kāsa (cough), harimā (chlorosis), jāyānya (tuberculosis), apacit (serofula), ḥydroga (heart disease), unmāda (insanity), balāsa (phlegmatic disease), yakṣma (general diseases), kṣetriya (hereditary diseases) etc. Among the above mentioned diseases kṣetriya, jāyānya, takman and balāsa were not continued to be used in the post Vedic time. On the other hand yakṣma, harimā, ḥydroga, kāsa, kilāsa and jalodara are the terms found to be using
even today. The disease *harimā* changed into *halīmakā* later, while a new word *kāmilā* was coined for jaundice.

Besides the diseases, their causes are also clearly mentioned in the *Veda*-s. According to *AV* the diseases are said to be transmitted from three possible sources, 1) poison within the body (*viṣa*), 2) parasites (*yātuḥkāna*) that enter into the body by the consumption of water, air and food, and 3) disturbances of the three derivative substances water, wind and those which are dry. This is believed to be the root of *trīdoṣa* concept found among Vedic people. But the word *trīdoṣa* is not used anywhere in the *Veda*-s. Quite interestingly, *RV* specifically mentions the three biological factors under a collective name *trīdātu*.

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त्रिन अभिना दिव्यानि भेष्जां त्रिन पार्वित्यानि त्रिन दत्तमध्यम
ओपानि शोभोऽमकार सूनबे त्रिधातु सां वहतं शुभस्पर्ती 11

(I. 34. 6)
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But many European scholars, Reinbold Muller and J. Filliozat, point out that the term 'trīdātu' refers not to the bodily humors. But Sāyaṇa explains the term as 'well-being of the three bodily elements *vāta, pitta* and *kapha*'. He further relates it to the three great *Ṛgvedic* Gods Indra, Agni and Soma. This interpretation of Sāyaṇa has been accepted by Wilson, Cordier and Pauthier and Braunet.
Kṛmi (worm) is reckoned as the causes of many diseases in many Vedic passages. The AV contains some kṛmināśana hymns. It is to be noted here that the kṛmi-s are treated like semi demons, and some of them are stated to be invisible to the naked eye. It is a bacteria in modern medical parlance. There are twenty types of external and internal kṛmi-s mentioned in the later Ayurvedic treatises of Caraka and Suśruta which seems to be similar to those referred to in the AV.

Besides these, the Vedic Sanshita-s further shed light on the treatment of diseases. AV refers to four major types of treatments, namely, 1) Ātharvapī (magical healing) securing health by favourable rites, 2) Āṅgirasī (witch craft or black magic) employment of spells to ward off evil, 3) Daivi (elemental) by nature cure and herbal cure use of water air plants etc., and 4) Mānuśī (human) by rituals, prayer, pacification etc.

आयुर्वीर्गसाहहसीवामुक्तजा उत्त

अष्टस्वरूप प्रजायं तथा च्वे प्राण जिन्मसि।

(XI. 4. 16)

It also recommends a number of minor treatments for controlling various disturbances i.e., mantra, maṇḍūkāṇa, prāyaścitta, ausadha, bali and homa, maṅgala and svastivācana, upāsanā and tīrtha. It shows that the
approach of medical system was psycho-somatic from the very beginning. The same procedure has been enunciated by Cakrapāṇin, the famous commentator of CS, in the daivavyapāśrayacakītā, one of the three major categories of therapeutic approaches of Āyurveda.\textsuperscript{53}

It is already pointed out that the Vedic Saṃhitā-s speak of the medicinal properties of water, air and the sun. The Veda-s prescribe the worship of rising sun or the sun rays for better immunity and healthy heart.\textsuperscript{54} It is also believed that the sun is the source of cosmic energy and destroys illness like jaundice, leucoderma, leprosy and heart disease. The ancient people are found to have offered prayers to Maruts to annihilate the disorders of vāta.\textsuperscript{55} It became one of the principal means in the Āyurveda. They also believed that the water is a common medicine for all diseases and it makes body and skin healthy.\textsuperscript{56}

Another peculiarity is that the Veda-s recommend sorcery for various types of poisoning. The AV seems far advanced in this matter. There are 6000 antidotes to poisons mentioned besides various charms used against poisons. Apart from the description of poisonous snakes and scorpions, poisonous plants and vegetables, poisonous elements in the sun and earth etc., are also well recorded in the AV.\textsuperscript{57}
Medicine in Vedic Literature

The Vedic literatures give some additional insights into the nature of ancient medicines. Brāhmaṇa-s describe the functions of five prāṇa-s (life-force) and the seven dhātu-s (tissues) in detail. Āitareyabhrāhmaṇa refers to the origin of the body, soul and several organs,58 drugs and diseases,59 curing eye diseases60 etc. According to Gopathabrāhmaṇa the diseases mostly break out at the junction of seasons. The yajñā-s are also performed at the same time. Thus they are also known as bhaisajyayajña.61

The Upaniṣad-s provide some information on the psychological, physiological and other medicinal concepts. They tacitly assume that, like the macrocosm, the microcosm represented by the human body is also constituted of the five elements.62 It is on this basic concepts, the holistic Indian medical tradition of the Āyurveda is founded. In the Chāndogyopaniṣad the concept of tridoṣa has been described using different terminologies such as tejas-pitta, ap-kapha and anna-vāta, which also related to vāk, prāṇa and manas.63 Thus it holds that food has an effect not only on human body but also on the mind. This remarkable observation has further laid foundation for the development of the psychosomatic concept. The Brhadāraṇyakaopaniṣad also gives a clear picture of
heart and blood vessels.\textsuperscript{64} Besides these, the description of \textit{pañcabhūtasiddhānta} and the growth of embryo in the womb are also discussed in detail therein. The \textit{Āyurvedic} statement 'धृवं छाव्यसम्भव' is corresponding to the statement of \textit{Brahmavallī} in the \textit{Taittirīyopaniśad} - 'पुरुषोऽश्चाश्चसम्भव'.

\textit{Sūtra} literature also contains some references to medicines. \textit{Śrautasūtra-s} refers to various plants which are used in sacrifices, various \textit{saṃskāra-s} which are helpful to promote the qualities of the body and mind are described in \textit{Grhyasūtra-s}. They are also referred to in the \textit{Āyurvedic Saṃhitā-s}. The \textit{Dharmasūtra-s} prescribe \textit{sadvṛttta} which has been adopted in \textit{Āyurveda}.

Thus, a survey of the \textit{Veda-s} and Vedic literature reveals that \textit{Āyurveda} had its root in \textit{Veda-s}, but represented in its primitive form. Thus, the Vedic period can be said to be a leap forward in the development of \textit{Āyurvedic} concepts. Certainly, the \textit{Āyurveda} is of later origin, but the core ideologies of \textit{Āyurveda} are not. It also has received considerable contributions from the Indus valley culture that was proven to be outside the Vedic ritualistic fold. That the excavatory findings such as horns of deer, yogic posture of Śiva etc., are found from the Indus civilization, points to the existence of a pre-Vedic system of medicine.
In order to understand the pre-Vedic history of Ayurveda, one needs to understand a complex relationship between man and medicine held in India because medicine is as old as man and must have come into being with the first awakening of human consciousness. The two devices, viz., archaeological evidences and literary records help us to trace out the ancient history of Indian medical system.

**Non-Vedic Sources of Ayurveda**

Indus valley civilization is usually known as the pre-Vedic or non-Vedic culture. Geographically this culture was extended to two famous sites Harappa and Mohenjo-Daro. It is considered to be the largest civilization of the ancient world during the Bronze-age, between 2500 B.C. and 1500 B.C. In the absence of literary sources, the archaeological findings from the sites of Indus valley civilization are the only source of our knowledge about the pre-Vedic culture. Evidences for the initial phase of existence of the well organized system of medicine are traced back to the archaeological remains of Harappa and Mohenjo-Daro.

1. **Archaeological Evidences**

No one knew the existence of a pre-Vedic culture until archaeologists first discovered and analyzed the cultural remains of
Harappa and Mohenjo-Daro in 1922 - 23. These archaeological evidences however help us to reconstruct the history of a living culture. Some of such archaeological evidences regarding the non-Vedic stream of Ayurveda are as follows:

a) Importance of Health Care

Harappan people held the belief that water is the source of all life and also it is the most powerful purifying agent. So they performed religious ablutions by these sacred waters. This great bath is a symbol, which shows the importance they attached to the water for health. It is quite possible, therefore, that hydrotherapy was a therapeutic measure used by Harappans to regain and to maintain health, which brings to mind the purpose of the Roman bath in the later period.

b) Systematic Arrangement for Sanitation

The pattern of the cities and buildings also indicates that both Harappa and Mohenjo-Daro were built after a careful town planning. Each and every house had a bath and toilet, fresh water tanks, courtyards, bed rooms, drainage system to remove wastes from homes rubbish chutes and brick lined well. All these are eminently suited to the climate. Frederic L. Dunn also reiterated the remark made by Stuart Piggott that the whole
conception shows a remarkable concern for sanitation and public health without parallel in the Orient in the pre-historic part. 68

c) Plants, Animals and Minerals used as Medicine

The archaeological remains also provide ample evidences of drug conception. The vegetation was guaranteed by the worship of the tree-Goddess. During the period of Indus culture the tree was worshipped either in its natural form or as it is personified and endowed with human shape and characteristics. 69 This indicates the importance attached to plants in human life.

The excavations carried out in the Harappan culture have brought to light several medicines like śīlājī or śīlājīatu which is largely used in India even today as a remedy for various illnesses like dyspepsia, diabetes and rheumatism. 70 Findings of cuttlefish bones and horns of red deer stored in homes suggest that they were used for treatments as they are presently known to have potentials to cure skin, eye and throat diseases. In this connection Kenneth G. Zysk quote the words of E. Makay: The horns of the rhinoceros are greatly esteemed in Eastern Asia, at the present day for their medical qualities and it may well be that they were valued for the same reason at Mohenjo-daro. 71
According to Marshall, the powdered horn could have used as medicine. It is prescribed in the Bower Manuscript 'śikhīṇādam ruḥḥ śṛṅgam ṛṣyaskandham, ghṛṭāplutam, dagdham antaḥ puṭe śvāsī lihyāt tan madhisarpiṣā. Later on the Aryans constituted the horns as a part of healing object against the internal disease, kṣetriya. A large variety of minerals and ores were known to the Indus people. The Cinnabar (mercuric sulphide) and Cerussite (a natural Carbonate of lead) found at Mohenjo-Daro were probably used for cosmetic and medicinal purposes.

d) Practice of Yoga

The seals excavated from the sites of Mohenjo-Daro and Harappa depicts a male-God, horned and three faced, seated in a traditional yogic posture and surrounded by animals. This is proven to be a prototype of the Śiva who is even now believed to be the God of Yoga, Medicine and Tantra. The yogic posture indicates the popularity of yogic practices at that time. The main purpose of yoga practice is to control the body and mind.

e) Concept of Female Energy

The figurines of female deities or mother-Goddess, often pregnant or carrying a child are another important excavations from the pre-Vedic
culture. The female figures are also depicted upside down with legs apart with a plant issuing from her womb. The worship of the mother-Goddess reveals that the non-Vedic people believed that the female energy is the source of all creation, and also represented nature and fertility. D. P. Chattopadhyaya observes it as:

There are, thus, two aspects of this ancient belief. On the one hand, the plant-producing activity of the earth is viewed as magically depending upon the reproductive capacity of the female body. On the other hand, the reproductive capacity of the female is viewed as being magically dependent upon that of the earth.

Gradually they began to think about the male energy behind the female fertility process. Marshall comments thus:

In this development of the primitive mother worship, the goddess was transformed into a personification of female energy (śakti) and, as the eternal productive principle (prakṛti), united with the eternal male principle (puruṣa) and became the creator and Mother of the universe (Jagannātā or Jagad-ambā), including the gods themselves.
The union of male and female principles is typified, in the combined purusa and prakriti concept of Sāṃkhya and the liṅga and yoni symbols of Śaivite shrines.\textsuperscript{80}

f) Magico-religious Beliefs

Harappan people strongly believed in the curative power of Shamans or Medicine men. They performed ritualistic medical healings which consisted of ritualistic dance, magical flights and the recitation of incantations and also they wore seals depicting animals and other amulets to ward off evil spirits.\textsuperscript{81} Marshall says that the Indus people also carried on a miniature of Liṅga and Phallus as amulet or as luck bringing talismans.\textsuperscript{82}

2. Literary Records

The Vedic scriptures are not just religious books but scriptures which contain many true scientific elements. The internal evidences from these ancient scriptures provide a fairly clear picture of the non-Vedic cultural milieu. According to the historians, the Vedic scriptures were said to be compiled by the Aryans, the primitive nomads, who came from central Asia. The Aryans made notable contributions to the development of science and technology in India.
The Aryan immigration into India is still a matter of dispute. The main stream version of Indian history has recently been challenged by a revisionist theory that claims that there is no evidence for the Aryan invasion. But there is a continuity of the same clan of people who traditionally were considered to be Aryans. The term 'ārya' means noble or honourable. Apart from this the terms like dāsa, dasyu and mleccha are also seen used on several occasions. These words are frequently ascribed to those people who are outside the Vedic fold. With respect to this Romila Thapar's following observation is noteworthy:

The Aryan and Non-Aryan were segregated through the instituting of caste. The upper castes and particularly the brāhmaṇas of modern times were said to be of Aryan descent and lower castes and untouchable and tribes were descended from the Dasas.83

According to Vedic Samhita-s some Gods such as Indra, Soma and Varuṇa, ruled as Kings, others like Agni were endowed with insignia and faculties of priestly power, some others the Maruts, of a much lower order, filled the ranks of divine warrior hosts. All these shows that there is a local social hierarchy within the family or tribe and likewise the local social conflicts, groups and generations of divine being, displace and
supersede each other, reflecting the crisis in civilization and in the ideal of their devotees. It also supports the view that the Vedic culture was not developed from outside India but within. Apart from this, the hymns of Veda however are not the product of a single age. Their composition extended for over many centuries and they therefore refer to many widely different cultures in the progress of civilization. The word culture may be defined as the ways of living built up by a group and passed on from one generation to another. It includes behaviour, ideals, beliefs etc. In that way the pre-Vedic culture spread into and mingled with Vedic culture.

Usually Vedas are said to be four in number viz., ṚV, Yajurveda, Sāmaveda and AV. But the ancient scriptures, such as Vedāṅga-s and Epic narratives are referred to as sacred texts, but AV finds no place in the list. According to Kauṭīlya, 'the three Vedas Ṛk, Yajus and Sāma constitutes the triple Veda, otherwise called as trayāṇādhyāt. It shows that AV, one of the rich store house of medicinal knowledge, follows, always only after the trayānādhyāt and is also often ignored. Besides these the physicians were also never granted a seat among the rituals of the sacrificial cults. Kenneth G. Zysk observes it as:

Even in the early Vedic period, physicians were outside the pale of the Āryan sacrificial cults probably because of their
association with the *Atharvaveda*, not yet considered a principal *śruti* (revealed) scripture. Moreover, their frequent travels beyond the frontiers of Āryan society in order to acquire the rich pharmacopoeia mentioned in the *Atharvaveda* brought them into frequent contact with non-Āryan peoples.\(^{85}\)

Unlike the other three *Veda*-s the *AV* contains a few references to agriculture. The *Atharvan*-s worshipped their deities as living beings and they performed their own domestic rites and sacrifices. All these show that the *AV* was itself outside the classic *Vedic* complex. Here it is worth quoting Arthur A. Macdonell:

In spirit, however, it is not only entirely different from the *Rg-veda*, but represents a much more primitive stage of thought. While the *Rg-veda* deals almost exclusively with the higher gods and conceived by a comparatively advanced and refined sacerdotal class, the *Atharva-veda* is, in the main, a book of spells and incantations appealing to the demon world, and teems with notions about witchcraft current among the lower grades of the population, and derived from an immemorial antiquity.\(^{86}\)
Apart from this the magic songs of the AV which by virtue of their constituents are certainly popular and ancient, do not have found in their original form in Samhita-s. It represents an amalgamation of Aryan and non-Aryan ideals. It also shows that they are brahmanized to a great extent. The brahmanization of the ancient magic poetry points to later editing of the text.\textsuperscript{87} According to J. Talboys Wheeler, The hymns are singularly free from any Brahmanical element, although later commentators have laboured to interpret them in accordance with Brahmanical teaching.\textsuperscript{88} It is sure that the upper castes had their own use for the theory and it was again given a twist which suited their social aspirations and political needs. They have not only modified the Vedic religion, but have also garbled and interpolated the Vedic literature, for the purpose of bringing old Vedic traditions and usages into conformity with later brahmanical ideas.\textsuperscript{85} Here it is worth quoting D. D. Kosambi’s observations:

Yet India shows extraordinary continuity of culture. This violent breaks known to have occurred in the political and theological superstructure have not prevented long survival of observances that have no sanction in the official Brahmin works, hence can only have originated in the most primitive
stages of human society; moreover, the Hindu scriptures and even more the observances sanctified in practice by brahminism, show adoption of non-brahmin local rites. That is, the process of assimilation was mutual peculiar characteristic of India.⁹⁶

Moreover, it seems that the Indian medical system was also subjected to an assimilation process common among dominant orthodox religious intellectual systems, whereby new information undergoes sufficient modification and adaptation to permit its integration into an established corpus of specialized knowledge. All these archaeological and literary evidences point out the quality level of the medical system and strong concern for public health among the non-Vedic people. Thus it can be concluded that the essentials of Ayurveda are as old as any other of Vedic corpus and also has been underpinned the Tantric culture.⁹¹

Development of Ayurvedic Samhita-s: (6th cen. BC. to 6th cen. AD.)

After the period of Veda the ancient Indian medical system has gone through various stages. Focus of Vedic medicine from magical and religious practice gradually shifted to relatively more scientific observations and experiments. The ancient Ayurvedic preceptors adopted the scattered medicinal elements from Veda-s and they arranged them
systematically and scientifically in the form of a treatise. Such compilations are known as Samhita-s. The period of compilation of such texts is also known as Samhitā period. What they actually incorporated in their medicinal treatises are a mixture of what they found in Vedic Samhita-s and what they are being taught by their ancestors.

This period was considered as the age of philosophical movement in India. The commentators on the Vedic Samhita-s had encouraged the existing discussion of philosophical ideas. Thus the formulated Vedic Samhita-s, which integrated the philosophical knowledge, marked a phase of new awakening in the history of India. These philosophies were influenced all the sciences during that time. Medical science also was not free from the influence of philosophical movement. The rise of empirico-rational medicine is also a result of the influence of the philosophical movement. Thus the medicine has broken its magico-religious strings and made allies itself with the principles of philosophy. This paved the way for philosophy to have a sound and logical grounding in Ayurveda.

It is during the Samhitā period that the ancient medical system of India became popular in the name of Ayurveda. In course of time it has been expanded scientifically to eight tantra-s or sections, namely Kāyacikitsātantra (general medicine), Śalyatantra (surgery), Śalākyatantra
Kaumārabhṛtyātantra (pediatrics), Bhūtavidyātantra (psychiatry), Agadatantra (toxicology), Rasāyanatantra (rejuvenation) and Vājīkarapatantra (aphrodisiacs). N. N. Bhattacharyya opines that they are the 'eight forms of Tantric texts were current as treatises on the science of healing which formed the basis of the eight main divisions of Āyurveda'.

The branches namely medicine and surgery developed first. The sages Ātreyapunarvasu and Dīvodāsa Dhanvantari are the founders of these two branches respectively. According to the tradition all the disciples of Ātreyā and Dhanvantari believed to have composed their own Samhitā-s. Among them only CS of Caraka, SS of Suṣrūta, Bheḷasamhitā of Bheḷa and Hārītasamhitā of Hārīta are available today. Among the Samhitā-s CS is directly connected with the branch of medicine and SS deals with surgery. During the period Kāśyapasamhitā was popular as a text dealing with pediatrics. The Samhitā-s provide a basic knowledge of all the branches of Āyurveda, with a deep speculation in one of them.

Carakasamhitā

Agniśatatantra of Agniveśa (8th - 7th Century B.C.) was revised and edited by Caraka nearly 1st century A.D., which presently known as CS. This work has been redacted again by a Kāśmīr scholar Dṛḍhābala, in 3rd or 4th century A.D. Notably, he retained the title CS. It is the
fundamental and the earliest known Āyurvedic work on Kāyacikitsā. It teaches not only the way to ward off diseases in this very life but also the ways to sustain the happiness in the life yet to come. Quite interestingly, it also speaks of the ways to salvation.

Suśrutasaṃhitā

In course of time the Dhanvantari school gave rise to the system of surgery. It was evolved by Suśruta in 5th century or 4th century B.C. and he gave proper shape to make it a full-fledged treatise called SS. As in the case of CS, the SS also got revised by Nāgārjuna in 4th or 5th century A.D. It is also believed that the Uttaratantra of SS is entirely the work of Nāgārjuna.

Suśruta felt deeply the necessity of propagating the material side of Āyurveda for the benefit of the society. Thus the Saṃhitā duly emphasize on the necessity of the dissection of humanity. While Caraka was relegated to Kāyacikitsā, mainly with plants with less stress on metals, Suśruta emphasized on both medicine and surgery and elaborated the use of metals.

Kāśyapasaṃhitā

The period of Kāśyapasaṃhitā is believed to be the 6th century B.C. Some part of the Saṃhitā is found lost. It was redacted by Vātsya in
7th century A.D. This is the only work available referring to the system of pediatrics. It also elaborately discusses the embryology, child birth etc.

**Bheḷasamhitā**

*Bheḷasamhitā* of Bheḷa which is said to be one-third in size of the CS, is actually lost. The text *Bheḷasamhitā* which we get today is actually a compilation made by Drīḍhabala. In fact, it contains elements taken from other *Samhitā*-s also.

**Hārītasamhitā**

*Hārītasamhitā* of Hārīta might have been written around 1000 years B.C. Whatever is available now is just the *Uttaratantra* of the *Samhitā*, but its authenticity is doubted by scholars. The book attributed to Hārīta was re-written by Nāgārjuna.

It is already noticed that an incredible paradigm shift occurred in the field of Āyurveda from the Vedic to the classical phase. This involved the transformation of a largely heterodox repository of medical knowledge into an orthodox brahmanical science. The opening verses of the Āyurvedic scriptures contain the traditional myths that recount the divine origin of the medical science and its transmission to humanity. It shows the way in which the brahmanization of Indian medicine took place.
Moreover, this traditional mythology was varied from one text to other.\textsuperscript{98} It also proves that the Hindu myths are used here as a device to interlace the non-Vedic medical thoughts into a Vedic or Brahmanical parlance. It implies that the mythological origin of \textit{Āyurveda} may well have been an artificial creation, superimposed on previously existing material before all the inconsistencies were rectified.

\textbf{Influence of Buddhism}

It may be noted that the science and technology in India made remarkable progress during this Buddhist period. It has made valuable contribution to \textit{Āyurveda}. In the Buddhist tradition, \textit{Āyurveda} was extensively developed and has been provided with an impetus for its advancement from magico-religious therapeutics to a rational one. Buddha was much impressed by the specific character of \textit{Āyurveda} and he supported both the study and practice of it in his time.\textsuperscript{99} He himself is called as Mahābhīṣak and his āryasatyacatuṣṭaya (four noble truths) is also based on the logic of medicine.\textsuperscript{100} He also said that his main concern was the problem of human suffering and its means for eradication. He was very much aware of the intimate relationship between mind and body and also thought that the source of all physical and mental disease and suffering are borne out of the lack of control of mind. As Buddhism was
founded on the principle of *ahimsā* the monks were against surgery because it was painful and it was viewed as an act of *himsā*. So they mainly propagated the branch of *Kāyacikitsā*.

The system of *Āyurveda* as formulated and established in the early Buddhist *saṅgha* in India, was transmitted nearly in its original form to other parts of Asia by the activities of Buddhist missionaries. The Buddhist missionaries began to teach *Āyurveda* along with Buddhism and other subjects in the universities like Nalandā and Takṣaśilā. In this way the medical system of Greece and Rome also had exerted their influence on *Āyurveda*. The history of the establishment of Buddhism in Tibet is also connected with the history of establishment of *Āyurvedic* medicine there. Evidences suggest that Indian *Āyurvedic* knowledge spread to Tibet around the 5th century A.D. At this period many hospitals were built. A considerable development was also took place in the field of nursing system, surgery etc. In general, the *Āyurveda* was always a significant part of Buddhism throughout the development of the religion.

The early Buddhist literature, Bower Manuscript, *Tripiṭaka*-s, *Saddharmapuṇḍarīka* and *Milindapañha* also contributed to the development of *Āyurveda*.
Bower Manuscript

It is one of the Buddhist treatises in Sanskrit. It was discovered by Col. H. Bower in 1980 from a small village of Kuchaga in Chinese Turkistan. According to H. Bower, the manuscript was written at some time around the 4th Century A.D. Several portions of the manuscript contain medical references. Most of them belong to Nāvanītaka which consists of seven manuscripts. It contains several ancient remedies and deal with the following categories of practices, viz., cūrṇa (powder), ghṛta (ghee preparation), taila (oil preparation), miśraka (recipes of various mixtures), basti (medicated enema), rasāyana (rejuvenation therapy), yavāgu (gruels of cereals indicated in specific conditions), vājīkaraṇa (aphrodisiac), aṃjana (various eye medicines), ksaraṃjana (hair dying methods), abhayaskalpa (recipes of abhaya), śilājatulkalpa (recipes of black Bitumen), citrakalpa (recipes for increasing agni) and kaumārabhṛtya (pediatrics). The book also systematically treats with all the eight limbs of Āyurveda. It quotes 29 formulations from CS, 15 from Bhelāsamāhitā and 6 from SS. The descriptions of lot of formulations from Kāśyapasamāhitā are also quoted here. There are references to Āyurvedic preceptors like Kāṅkāyana, Suprabha, Nimi, Uśanas, Vādvali, Bṛhaspati, Agastya, Dhanvantari, Jīvaka and Kāśyapa.
Tripitaka-s

The Tripitaka-s are considered as the authoritative text of Buddhism, which consists of three parts namely, Suttapiṭaka, Vinayapiṭaka and Abhidhamapiṭaka. Among them the Vinayapiṭaka deals with the disciplined life style to be followed by Buddhist monks. It comprises of two parts - Chullavagga and Mahāvagga. The Chullavagga section deals with various medicinal elements. It mentions the jentaka sveda, a type of fomentation techniques, which had found accepted and referred to by Caraka by the name jentaka.\textsuperscript{103} The surgery of brain and abdomen, techniques for bloodletting and wound healing, and treatments for poison are discussed therein.\textsuperscript{104} The preparation of medicines in the form of ghṛta (ghoc), navamīta (butter), madhuv (honey), taila (oil), and gula (jaggery) is collectively known as pañcabheṣaja.\textsuperscript{105} It may be the modified form of the pañcasāra of S.S.\textsuperscript{106} The chapter Bheṣajaskandha in the Mahāvagga represents the earliest codification of Āyurveda, such as various kinds of salts used in medicine as well as the eye ointments, rasāṇḍana, śrotāṇḍana etc. It also sketches the biography of Jīvaka.\textsuperscript{107}

Saddharmapuṇḍarīka

Saddharmapuṇḍarīka is one of the most important mahāyāna scriptures belonging to the 1\textsuperscript{st} century A.D. It deals with the philosophical
teachings of Buddha. In it references are made to anatomical parts, the body as a whole, the total number of bones in the body, various joints, arteries, veins, tendons and vital organs. In addition to it different types of medical plants, treatment of vātaroga (rheumatism) are also mentioned in this work.

**Milindapañha**

*Milindapañha* or *Milindapuruśa* is a non-canonical pāli scripture presented in the form of questions and answers between the Buddhist King Milinda and the superior monk Nāgasena. It discusses in detail the concept of trīdosha theory of Āyurveda, where the three biological humors vāta, pitta and kapha and their disequilibrium are stated as causes of disease.

Besides these, later Buddhist medical recipe works like *Jīvakarita, Kulatadvādana, Divyāvadanaśataka* and *Lalitavistāra* are also noteworthy in this regard. The similarities between the early Buddhist monastic and the early Āyurvedic medical systems suggest existing continuity in medical doctrine and practice. It also suggests that both of these systems were probably derived from a common source of medical lore.
The great diffusion of Buddhism throughout the subcontinent occurred during and after the time of Aśoka, who was the greatest among the Mauryan rulers and also a follower of Buddhism. Aśoka (3rd century B.C.) was himself keenly interested in the Ayurvedic medicine. He engraved the prescriptions for treatment of general diseases of human beings and animals on rocks and pillars. In this regard his edicts made substantial contributions to the expansion of Ayurveda. He was also known to have established public hospitals. This was the first inscriptive record of the establishment of Government hospitals not only for human beings but also for animals.

*Aṣṭāṅgahṛdaya* and *Aṣṭāṅgasāṅgraha*

*ĀH* and *Aṣṭāṅgasāṅgraha* are the two treatises emerged during the period of Buddhist influence. *ĀH* of Vāgbhaṭa (7th century A.D.) is a fusion of both medical and surgical aspects of Ayurveda. Vāgbhaṭa accommodated in his work not only the views of Caraka and Suśruta but also of Bheḷa and Hārīta. He has imbibed the Rasāyana system also. *Aṣṭāṅgasāṅgraha*, which also attributed to Vāgbhaṭa, is also based on the earlier Samhita-s of Caraka and Suśruta. But this Vāgbhaṭa is different from the author of *ĀH*. He is known as Vṛddhavāgbhaṭa or Vāgbhaṭa I. His period is 6th century A.D.108
The two texts tend to maintain brahmanical authority by recounting the mythological origin of Āyurveda on the model of the earlier scriptures. At the same time some version of Āṣṭāṅgasāṅgrahā pays homage to the Buddha as healer. This reference is rooted in Mahāyāna Buddhism. The first verse of Alī begins with the word 'rāga' which depicts an apūrvavaidya, who is naturally related to Buddha. This shows that both of the treatises also acknowledge contributions made by heterodox systems to Āyurveda. Hence it is reasonable to assume that the process of brahmanization of Āyurveda was completed during this period.

**Contribution to Rasāśtra**

It was in the later period Nāgārjuna, the follower of Buddha, gained popularity. He was the most prominent scholar in the field of alchemy.\(^{106}\) He infused a new life into the science of medicine in his eminent alchemical works like Rasaratnākara, Kaśapūṭatantra and Āṅguyacintāmaṇi. It is generally believed that the system of alchemy originated in China. They looked upon the two constituents viz., Mercury and Sulphur, as the Yin and Yan, the two opposing principles, comparable to prakṛti and puruṣa. This concept was in consonance with the Chinese religious and philosophical doctrine known as Taoism.\(^{110}\) Though the Indian concept of alchemy is also based on the male and female
principles, the mercury was regarded as Śiva, the male energy and Sulphur as Pārvatī, the female energy, which is just reverse in the Chinese belief. This great chemistry with its philosophy of alchemy became popular during the Buddhist Mahāyāna culture (5\textsuperscript{th} or 6\textsuperscript{th} century A.D.), tends more to Tantric tradition (7\textsuperscript{th} or 8\textsuperscript{th} century A.D). This shows that India adopted the Chinese principles, and evolved a Tantric notion of alchemy by associating mercury with Śiva's semen and Sulphur with Pārvatī's menstrual discharge. There is a possibility that Nāgārjuna, who had access to both the Taoist and Tantric ideas, initiated the Tantric concept of Indian alchemy.

Certainly the Rasasāstra tradition had its origin in the pre-historic period. The AV contains the earliest references to various minerals and metal substances. It points how far India is advanced in its knowledge of minerals over centuries. The CS and SS also contain various references to mercury and the purposes it can be used for. It must be remembered in this context that the two Śamhita-s passed several stages of redaction. And Nāgārjuna, the great alchemist, was redacted the SS.\textsuperscript{111}

Though, Mercury and Sulphur were very prominent during this period, its special usage in connection with the medical science become
popular only after the 11th century A.D, which is considered as the medieval period of Indian history.

**Āyurveda in Medieval Period: (7th-15th Century A.D.)**

The Muslim invasion in India began in the 7th century A.D. During this time Muslim rulers slaughtered the Buddhist monks, destroyed the universities and burned the libraries. It is after the 10th century A.D, the golden age of Āyurveda came to an end.

The Arab physicians gained an in-depth knowledge of Indian medicine Āyurveda and they evolved a new system of medicine called Unāni, by combining Āyurveda with Greek medicine. Unāni confined itself to benefiting from Āyurveda's surgical and pharmaceutical resources. The Muslim rulers bestowed all favour and patronage on Unāni system of medicine. Because of some unknown reasons, Āyurveda ceased to get all support from them. Hence the practice and teaching of Āyurveda became sluggish. But at the same time in the courts of the Delhi Sultans patronage was provided to translate Sanskrit texts on medicine into Persian and Muslim physicians began to learn medical manuscripts. This trend continued in the period of the Lodis. Hakim Yusuf bin Muhammed bin Yusuf al-Tabib Khurasani, a well known physician, wrote with equal
confidence on both Unāni and Āyurveda in the reign of the first Mughal emperor Babur.\textsuperscript{113}

The commentarial works such as Cakrapāṇin's (10\textsuperscript{th} century A.D.) Āyurvedadīpikā (Āyu.Dī) on CS and Bhānumatī on SS, and the Nibandhasaṅgraha (Nib.Sa) of Ṯalhana (12\textsuperscript{th} century A.D.) on SS also come to be written during this period. In addition to it, Aṣṭāṅgaṅganaṅghatu of Vāgbhaṭa (8\textsuperscript{th} century A.D.), Paryāyaratnamālā of Mādhava (8\textsuperscript{th} century A.D.), Dhanvantari Nighantu of unknown author (10\textsuperscript{th}-13\textsuperscript{th} century A.D.), Dravyaṅgaṇasaṅgraha of Cakrapāṇidatta (10\textsuperscript{th} century A.D.), Mādhavadravyaguna of Mādhavakavi (13\textsuperscript{th} century A.D.), Piḍayadīpaka of Vopadeva (13\textsuperscript{th} century A.D.), Madanavinodanīganaṅghtu of Madanapāda (13\textsuperscript{th}-15\textsuperscript{th} century A.D.), Rājanīganaṅghtu or Abhidhānacūḍāmaṇī of Narahari (14\textsuperscript{th} century A.D.), Bhāvapraṅgāṅganaṅghtu of Bhāvamiśra (16\textsuperscript{th} century A.D.), Pathyāpathyanīganaṅghtu and Dravyaṅgaṅṣataka of Trimalla (15\textsuperscript{th}-17\textsuperscript{th} century A.D.), Pathyāpathyaviniścaya of Viśvanāthasena (16\textsuperscript{th} century A.D.) etc., are also originated in this middle age.

During the Muslim period until the 16\textsuperscript{th} century, the activities in the field of Āyurveda were deeply influenced by Unāni system of medicine and mainly focused on rasakriyā or alchemical preparations, which was
prominent among the Arabians. It was given a more practical phase than before. Many scholars wrote several substantial works on the subject. They are mainly compilations in nature. Some texts are such that the alchemical ideals form only a part of them, while some other texts are wholly devoted to alchemy. Most of them are Tantric works. It shows that the Tantric alchemical works are interlinked with the chemical and medical literature.

Āyurvedic Treatises on Alchemy

There are many eminent Āyurvedic treatises on alchemy which originated in the middle age. They are as follows:

*Mādhavanidāna* of Mādhavācārya (8th century A.D.) dwells exclusively on the diagnosis of diseases. *Cikitsāsārasaṅgraha* of Vaṅgasena (9th-10th century A.D.), exclusively deals with the purification of steel, killing of iron by melting, powdering, preparation of quick silver and other mercurial mixtures. Cakrapāṇin (10th century A.D.), the commentator of both *Caraka* and *Suśruta*, wrote the celebrated texts *Cakradatta*. The texts contained the medicinal uses of killed iron, *mandura* or rust of iron and *kaṭjali* or mercuric sulphide. *Siddhayoga* of Vṛṇḍa (10th century A.D.), which discusses the importance of minerals in the Āyurvedic treatments, *Sāṅgadharasamhitā* of *Śāṅgadhara* (14th century
A.D.) which systematized the materia medica of Āyurveda and also incorporated the use of mercurial and metallic preparations in the therapeutics. Rasaratnasamuccaya of Vāgbhaṭa (13th century A.D.) describes various metallurgical and pharmaceutical processes. Julius Jolly states that the text 'differs as strongly as possible from Aṣṭāṅgasāṅgraha and Aṣṭāṅghadāya in contents as well as in style.'\(^{14}\) Bhāvaprakāśa of Bhāvamiśra (16th century A.D.) describes materia medica properties and use of medicine and mercurial preparations. Yogaratnākara (17th century A.D.) of an unknown author and Bhaisajyaratnāvalī of Govindadāsa etc.

As mentioned earlier there are many tantric works on medicinal alchemy. Rasaratnākara, Kaṭṣapūṭatāntra and Ārogyacintāmaṇi of Nāgārjuna (8th century A.D.), Rasahṛdaya of Govinda (8th century A.D.), Rasānava of Bhairavānandayogī (12th century A.D.), Rasasīta of Govindācārya (13th century A.D.), Rasendracūḍāmaṇi of Somadeva (12th-13th century A.D.), Rasendracintāmaṇi of Mādhavasena (14th century A.D.) etc. are some of the most important works among them.

All the above references based on the medical use of alchemy shows that the Rasāyana system of Āyurveda is closely connected with the Tantric tradition. It must be noted here that the alchemical form of medicine is very popular in South India especially in Tamil Nadu where
the *Siddha* tradition is practiced. This shows some possibility of interrelationship between *Ayurveda* which flourished in North India and also in Kerala, and *Siddha* system of medicine.

**Siddha Medical System**

Like *Ayurveda*, *Siddha* medicine also is regarded as the oldest medicine in the world. Its origin and development are also traced to the mythological sources belonging to the origin and development of *Saivism*. Lord Śiva is said to be the father of *Siddha* medicine. The word 'siddha' is used to denote Śiva as well as Buddha. Siddha or semi divine being of great purity and perfection and said to possess the eight supernatural faculties. According to the *Purāṇa*-s, the Siddha-s are grouped them with Devarṣi-s.\textsuperscript{115}

The exact history of origin of *Siddha* tradition is uncertain. According to the Tamil legends, the origin of *Siddha* tradition is attributed to Agastya (10\textsuperscript{th} century A.D). Siddha-s are well known for their knowledge on alchemy, Bhogar and Tirumular have been considered to be the traditional authors of alchemy in *Siddha* tradition. Bhogar, who was believed to be a Chinese philosopher, was came to South India and became the founder of one of the seven sub sects of the Siddha-s (Sittars in Tamil).\textsuperscript{116} Tirumular the other well known preceptor of *Siddha* tradition
came from Kashmir. Kashmir is also believed to be the birth place of Śaivism. This shows the possibility that the Siddha-s might have been associated with Tantrism. The Tantric worships and practices definitely originated in India and spread to China through Tibet and other countries.

In the Siddha medicine the use of metals, minerals and alchemical products is predominant. The South Indian Siddha-s were zealous adepts in alchemy. They are replete with methods and techniques of converting lead to silver, silver to brass, brass to gold and so on with the herbal extracts and mercury. Mercury is an integral part of Tantrism too.

Another technique of conversion of base elements into gold with mercury or simply the art of gold-making is known as rasavadhāma, which is one of the 64 traditional arts of India, also dealt with by Siddha-s. Besides this, preparations of medicines out of mercury and herbs respectively used to rejuvenate the aging body are unique in Siddha literature. The works of Siddha-s not only deal with alchemy alone but with yoga and medicine also.

The basic concept of Siddha medicine is the same as those of Ayurveda. It differs little from Ayurveda in terms of concept, materia medica and practices. The Siddha-s traditionally transformed their knowledge in the form of oral hymns. The practitioners also kept their
medicinal knowledge and formulae as a secret and were reluctant in sharing it with outsiders. Even now this Siddhavaidya system is hidden in the hands of a small number of traditional Siddha practicing families. Moreover the most of the works of Siddha-s are in Tamil. And they are in manuscript forms. And also they often hide the names of the herbs or minerals in big phrases and metaphors. However, it is to be noted that Siddhavaidya survived longer than Ayurveda and has gained considerable support in Kerala and different parts of India.

**Ayurveda in Kerala**

Ayurvedic system in India gained more popularity in Kerala than other states. The state has a tropical climate which is believed to be suitable for Ayurvedic curative and restorative practices. The fundamentals of Ayurveda practiced in Kerala are not varied from those of the other states. The only difference of Kerala from the other parts of India is that in Kerala the importance is given to Vāgbhaṭa’s Aṅh and Aṣṭāṅgaśāṅgraha. At the same time the Kerala Ayurveda practitioners also follow the treatise Sahasrayoga, which contains accounts on several traditional medicinal concoctions. The formulations, such as išanīkuzamā, kasturyāṇigulika, marmagulika, karuttagulika, gorocanāṇigulika, dhanvantaramgulika and kompaṇcāṇigulika and the
treatment methods such as viśacikītsā, marmacikītsā, gajacikītsā, dhāra, piziccil, navarakkīzi, tālam etc., are unique to Kerala tradition of Ayurveda.

While discussing about the Ayurvedic tradition of Kerala the eight families of Nampootiri Brahmin known as Aṣṭavaidya-s have much significance. They are called as Aṣṭavaidya-s because they practiced all the eight branches of Ayurveda for generations. The Aṣṭavaidya-s enthusiastically safe guard and promote the ancient system of medicine. The present practitioners of the Aṣṭavaidya families are Pulāmantoḷ, Ālathiyūr, Kuṭṭaṅceri, Trīssur, Taikkāt, Eledatt, Ciraṭtaman, Vayaskara and Veḷḷot. It is also believed that Vāgebhaṭa, who lived in Kerala, also considered as the founder of the Aṣṭavaidya families of physicians. Vāgebhaṭa is also considered a follower of Buddhism. Hence it could be said that the Aṣṭavaidya-s are the descendents of the early Buddhists.

The importance of Ayurveda in Kerala is further enhanced by Siddha and Marmacikītsā in Southern Kerala and Kalaricikītsā in the Northern region. The legendary herbal mountain Agastyakūṭam, nearby Thiruvananthapuram, has a history of Siddha system of medicine. Traditionally the mountain considered to be the abode of Agastya, the foremost among the Siddha-s who developed the Siddha medical system.
According to the Tamil Saṅgīm literature the Agastyakūṭam is considered as the abode of Avalokiteśvara, a Buddhist deity. Vāgbhaṭa-II, himself stated that Avalokita was his preceptor.¹¹⁸

As far as the contribution to the Āyurvedic literature is considered Kerala has a unique place. There are various Āyurvedic works written by the Keralite Āyurvedic scholars and practitioners. They are the commentaries on original works, independent studies of these works, compendium of popular formulations and the traditional methods of treatments. The commentaries on Alī such as Śaśilekha of Indu, Kairali and Lalita of Pulamanthol Moos, Vākyapradipikā of Paramesvaran Nampootiri, Sārārthadarpam, and Bhāvaprakāśa of Kaikkulānāra Ramavarier, and Arupodayam of Govinda Vaidyar; Sāracandrikā the commentary on Mādhavanidāna of Paravūr Kesavanasan; Works on pediatrics like Ārogyakalpadruma of Kaikkulānāra Ramavarier, Karappan of Koṭuṇi allūr Kunjikuttan Tampuran, Ārogyacintāmaṇī, Garbharakṣākaraṇī and Vaidyavijñānaṇī of Vallathol; Marmadarpaṇa, a work on kaṭaricikitsā, of Chirakkal T. Sridharan Nair; and several other independent works such as Bhāskara, Yogāmṛta and Aṣṭāṅgasāra of Upputtu Kannan, Hṛdayapriyā and Sukhasādhakarṇī of Vaikkom Pachu Muthath, Rasavaiśeṣika of Bhadantanāgārjuna, Vaidyamanorama of
Vaidyavarya Kalidasa (Keralite), Sindūramañjari of Taikkāṭṭu Narayanan Mooss and Alattūr Maṇipravaḷam of Alathūr Nampi are popular among them.

In addition to it, there are several other anonymous works like Paṭhyam, Brhatpāṭhyam, Hṛdaya, Rasopanīsat, Dhārākalpa, Prayogasamuccaya, Yogaratnaprakāśikā etc., are also available.

Āyurveda: Before Independence (17th-19th century A.D)

After Muslim invasion the European traders arrived at the beginning of the 16th century. During that time Āyurveda became almost a neglected field of Indian medicine. It was confined to few districts and that too among the poor people; and Unāni was the medicine of the ruling class. First the Portuguese, then the Dutch and later the English East India Company set up their trading centres in India. Their spice trade eventually resulted in contact between European and Indian medical practitioners. As it is likely to happen they also brought with them their own system of medicine.

Towards the end of the 17th century the Europeans took great pains to learn Āyurveda. But it is to be noted here that this was mostly on the
level of folk medicine. They made a thorough study of local plants and their medicinal properties and recorded the details.

In the 18th century the English East India Company became the largest and the most powerful trading company in the East. During the period Indian medicine continued on traditional lines. Most of the Europeans were contemptuous of Indian medicines and science. The Western system of medicine including Allopathy and Homeopathy was introduced in India during this period.

The advancement of Ayurvedic education took an abrupt turn in the year 1835. To make the matters worse, in this year British East India Company closed and banned Ayurvedic schools. This was another reason for the decline of Ayurveda. Till the end of the 19th century the entire education of Ayurveda was restricted to the level of gurukula system. The surgery or Šalyatantra, which gained wide acceptance during the time of Suśruta, also declined to the status of theoretical science.

During the later part of the British rule the development of Ayurveda gained momentum. The significant advance made by European countries in this period is that they began to teach the Indians experimental sciences purely on modern basis.
Revival of *Ayurveda* (up to present age)

The people started looking back to their own heritage and a stage is set for revival of *Ayurveda* along with the independence movement. In this period *Ayurveda* propagated throughout India through various educational institutions. At present *Ayurveda* is taught together with modern medicine where traditional medicine is sought to be explained in terms of modern science. However, the efficacy, acceptance and availability of *Ayurvedic* system of medicine kept it alive, and there was a revival in the early years of the 20th century. Different state governments in India started regular teaching of *Ayurveda* and committees were also formed to improve the standard of *Ayurveda*. Some of the committees mentioned below.\(^{121}\)

The government of Madras instituted the first committee on indigenous system of medicine in 1923. In 1944 Sir Joseph Bhore Committee was set up to study the future of health organization in India. However, the Bhore report created lot of disagreement in the field of *Ayurveda*. As a result of this Chopra Committee was set up on the recommendations of the health minister's conference, and the committee submitted its report in 1948. It urged support for Indian medicine and its integration with Western medicine, particularly to teach the students both
the Western and indigenous system of medicine. To bring equality in education and research in \( \text{Ayurveda} \), Pandit Committee was appointed in 1950, which made several recommendations for teaching and research in \( \text{Ayurveda} \). According to the recommendation of these committees Central Institute of Research in Indigenous system of medicine was established in 1959. This opened up post Graduate education of \( \text{Ayurveda} \). In 1959 Central Council for research was established, which started research in \( \text{Ayurveda} \) at different centres throughout India. The Central Council for Research in Indian medicine and Homeopathy was established in 1969 with particular responsibility for development and promotion of research on scientific line in \( \text{Ayurveda} \) and Homeopathy. The Central Council of Indian medicine was set up in 1971 to regulate the traditional healing systems like \( \text{Ayurveda} \), \text{Unāśi}, \text{Siddha} and Homeopathy. The 1982 Health Policy tried to interlink the functioning of traditional health practitioners and their health services with the total health care system of India.

Hundreds of \( \text{Ayurvedic colleges} \) affiliated to many Universities are arising all over the country today. This includes Vaidyaratnam P. S. Varier Ayurveda College, Kottakkal, and Vaidyaratnam Ayurveda College Taikkattussery, Kerala; Regional Research Institute (Ayurveda), Bangalore; Dr. A, Lakshmipathi Research Centre for Ayurveda, Chennai;
University of Ayurveda, Jamnagar; Institute of Post Graduate Education & Research in Ayurveda, Calcutta; Central Council for Research in Ayurveda and Siddha, New Delhi; Regional Ayurveda Research Centre, Jhansi; Central Research Institute for Ayurveda, Lucknow; Aligarh Unani & Ayurvedic Medical College, Aligarh etc. Besides, regular, under and post graduate courses are offered by the Banaras Hindu University in Varanasi, and Gujarat Ayurveda University runs a special Ayurvedic course (of one year's duration) for foreigners.

In the last three decades Ayurveda has gone global as part of traditional and natural form of healing. In 1995 the India Government has created a department comprising Ayurveda, Yoga, Unānī, Siddha and Homeopathy, within the ministry of health and family welfare, and was renamed as 'AYUSH' in November 2003. The main objective behind such integration is primarily to focus the attention on prevention rather than cure, the main default in the health care system. WHO also has recognized the importance of Ayurveda and its necessity for global health. Today, it is one of the six medical systems in India that are officially recognized by the Government, the others being Allopathy, Siddha, Unānī, Homeopathy and Yoga and Naturopathy. Ayurveda is also accepted a legal health care
system in Bangladesh, Sri Lanka, Trinidad, South Africa, New Zealand, Australia, UK and Mauritius.

The *Ayurveda* which stands for the medical tradition of India has passed through several stages, which began with the pre-historic age, continued through the hymns and charms of the *Veda*-s and the literature of different centuries. Although it sought to wean itself out of Vedic practice and ideology, in the classical period it accepted various Indian philosophies as its theoretical basis. All these references bring to our notice that there has been a steady progress of Indian medical system of *Ayurveda* right from the Vedic times. As a result it becomes clear that the structure of *Ayurveda* was characterized by a dual nature which consists of both modern and traditional.

In brief, as stated by S. K. Ramachandra Rao,¹²² the indigenous medical system *Ayurveda* has four main stages of development. 1. The first stage goes back in its origin to a very remote past. 2. In the second stage the great sages Caraka and Suśruta collectively designated the system as *Ayurveda* and sought to be integrated with Vedic corpus. 3. In the third stage the system of therapeutic alchemy known as *Rasavidyā*, in which the use of metals and mercury is extensive, is normally included in the *Ayurveda* tradition. This system developed almost out of the Vedic
corpus, and had profited by contacts with the Arabian, Chinese cultures.

4. The fourth line of development is the Siddha system which is obviously incorporated into Ayurvedic tradition. In all the four stages of development, the Ayurveda was rooted in the non-Vedic and the pre-Vedic culture and has been influenced to a great extent by all systems of classical Indian philosophy, especially the Sāṃkhya-Yoga complex.
Notes

1. p. 33.
2. Vaijasaneyasamhitā, Ch. V.
3. या त्वा रद्द युक्तिवधा नमोऽपि दुःखी युक्त या सहृदा।
उन्हों वो आध्यात्मिक त्वा ग्याजना शुभ्रोऽपि। RV. II. 33. 4.
4. RV. I. 43, 2; II. 33, 2, 4, 12, 13; V. 22, 11; VII. 46, 3; AV. II. 22, 26 etc.
5. RV. I. 114, 8; II. 33, 11, 14.
6. वा यो महाना महत: शुभ्रोऽपि वा ज्ञातान्त्रिकोऽपि या महोऽपि।
गायिन महाश्रुष्टिः जिता नत्ता सोऽपि। RV. I. 33, 13.
7. ज्यरतु संहुऽपि महाश्रुष्टिः कामीन्द्रकृत्यमेधाः CS. Nidāna. I. 35.
8. सोमें सानुमरं देवान समातुमणमिवांश।
पुनः संहुऽपि महाश्रुष्टिः RV. I. 310.
9. प्रक्षेपः देवाः निष्कुत Vaijasaneyasamhitā, XVI. 5.
10. शरतं मंगलं वृक्षं मामहां तमं ग्रन्थलिङ्गेन चिन्हः।
आद्यं स्वाभावं अध्यायनवं ज्ञातिस्थायं चक्रध्वजब्रह्मसत। RV. I. 117, 17.
11. आयुर्वेदायसिनं देवोदेवः शिरः प्रत्येकस्तमुः RV. I. 117. 22.
12. ibid., I. 112; X. 39.
13. ibid., X. 39, 3- 5.
15. ibid., I. 117. 13.
16. During the Vedic time daivyayapāśraya or spiritual treatment had been given relatively much importance while in the Samhitā age the yuktivayapāśraya or medical treatment had gained popularity. Both kinds of treatments are found in classical Ayurvedic treatises.
18. RV. X. 49, 94. 1 - 23.
19. ibid., VIII. 72, 17, 79. 2; X. 25. 11, 97. 18.
20. AV. XIX. 35.
Jaṅgīdā (Terminalia arjuna) used as an amulet against all sorts of diseases. The word jaṅgīdā does not occur in latter literature.
*Pippāli* (Piper longum) cure all types of arthritic complaints.

22. *ibid.*, IV. 17. 18.
The *apāmārya* (Achyrantes aspera) is used to wipe away the *kṣetra*īya. It is again is said to remove death by hunger and thirst. It acts as a vaccine because it has the power to control all other medicines. It has the unique ability to all ill effects of black magic.

23. *ibid.*, V. 5.
*lāksā* (Coccus laccis) cures wounds, he who drinks it lives. *Kauśikāstra* prescribes intake of milk boiled with lāksā. (XXVIII. 5, 14).

24. *ibid.*, V. 4. 1, 2; XIX. 39. 5, 6.
*Kuṭha* (Saussurea lappa) is considered as the principal medicine for fever and all types of diseases. It is a universal medicine (कुट्हा किचःमेज्ज). It is said that the kuṭha was originated from the tree *aśvatthā*.

*Prāśaparṇī* (Urania picta) protective against all evil beings. According to Sāyaṇa it is *citraparṇī*.

*Rohini* (Picrorhiza kurroa) also called *arundhati* and *lāksā*. It is used for curing bone fracture.

27. *ibid.*, IV. 37. 3.
*Gulgulu* (Commiphora mukul) was a remedy for various disorders and was also used as incense. It was also used in veterinary medicine.

*Śatāvara* (Asparagus racemosus) cures hundreds of diseases and protects from Gandharva.

29. *ibid.*, IV. 5. 5.
*Arundhati* (Sida cordifolia) cures all diseases. It is also identified with *candana*.

30. *ibid.*, IV. 37. 5; RV. I. 222. 5.
*Arjuna* (Pentaperta arjuna) cures consumption and poisoned blood.

31. RV. III. 36. 8, 50. 56; VI. 53. 8; VII. 1. 6; IX. 1. 84; X. 163,168; AV. II. 33.

32. AV. I. 17. 1, 3; RV. I. 121. 11.

33. AV. I. 25. 1, 3; V. 22.
Sāyaṇa explains it in general terms without mentioning any particular disease.
34. *ibid.*, I. 10; VII. 83, 89.
Both Caraka and Suśruta described it as a *udara* condition called either *dakodara* or *udakodara* (CS. *Cikitsā*, XII. 45-48; SS. *Nidāna*, VII. 21-24).

35. \( \textit{RV. V. 53. 1; AV. I. 23. 24.} \)
Among the four varieties of *kilāsa-s* (*añjula, tanūja, yottvacī and dūṣya*) Caraka refers to the first three varieties (*Śūtrā. XIX. 3*) and enumerates them in the section of *Cikitsā*. Suśruta mentions that the *kilāsa* is also a form of *kuṣtha* (*Nidāna. V. 17*).

36. \( \textit{AV. VI. 105, 107.} \)
*Kāsa* is closely associated with *takman*. But it does not normally accompany with it. It is also common among other types of febrile diseases.

37. \( \textit{RV. I. 50. 11. 12; AV. I. 22.} \)

38. \( \textit{AV. VII. 76. 3, 4, 5.} \)
In *Taittirīyasamhitā* (II. 3. 5. 2) the word *jāyuṇā* occurs in connection with *rājyaakṣmā* and *pāpayaksā*. Sāyāga has made the meaning for *jāyuṇa* thus - *jāyuṇa* जायुणा जायुण. जायुणे जायुण, जायुणान्.

39. \( \textit{ibid., VI. 25; VII. 74, 76.} \)
It is also known as *gaṇḍamātī*. They are often located about the neck, on the shoulders, the abdomen, hairs of the head etc. It is probably represents the disease *apaci* mentioned in the SS. (*Nidāna. XI. 8, 9*).

40. \( \textit{AV. I. 22; RV. I. 50. 11. 12.} \)
*Hṛdyota* is also used in synonym of *hṛdroga*. Sāyāna defines it as - हृदय तिलकवति दिन्ययति संलक्षित्तिति हृदय्यात ब्रह्मा.

41. \( \textit{AV. VI. 111.} \)
There are two kinds of insanity mentioned in this charm viz. *unmādita* and *unmatta*. In classical Āyurvedic treatises it is termed as *unmatta* or *unmāda*. The most severe forms of insanity, *bhūtomāda*, which is closely related to the insanity mentioned in *AV*.

42. \( \textit{ibid., VI. 127.} \)
Later medical treatises like *AH* understands it simply as phlegmatic humor. (*Śūtrā. XXIII. 19; Uttarasthāna. XL. 31*). Karambelkar considering that *bhūlāsa* is related to *kilāsa* in form posited that it was a skin disease (*op. cit.* p. 220).

43. \( \textit{ibid., II. 33; VI. 20; RV. X. 137. 4; 161; 163.1-6.} \)
In *Taittirīyasamhitā* the *yaksma* is distinguished as of three kinds —
rājayākṣmā, pāpayākṣmā and jāyena (II. 3. 5. 2). In SS the word yakṣmā occurs in the compound rājayākṣmā and characterized by the symptoms of aversion of food, fever, dyspnoea, cough haemoptysis and hoarseness of voice (Uttaratantra, XI. 1. 11).

44. AV, III. 7. 2.
What disease is really intended is quite uncertain. The Taityāriyabrāhmaṇa speaks about it as- “स्रोत्वकार्यां कर्त्तेऽवस्थानं तत्रात्मकम्” (II. 5. 6.)

45. यथायां संवेष्यं विसं निर्वाचयिमहां लत। ibid., IX. 8. 10

46. ibid., I. 7. 8.

47. यो अस्त्रा वातना यहुः सुषमोऽस्त्र । ibid., I. 12. 3.


49. RV, I. 191. 1-16.

50. AV, II. 31, 32.

51. ibid., II. 31. 2; V. 23, 6.

52. CS. Śūtra, XIX. 4; Vīmaṇa, VII. 9; SS. Uttaratantra, I.IV. 7.

53. तत्र देवताश्रमं - मन्मोक्षधिमिनिः मन्मोक्षधियुक्तोऽहोनियमयम्प्रयोगावतस्वाभिज्ञानाविश्वस्तवन्तायामिनात्मकम्।
CS. Śūtra, XI. 54.

54. RV, I. 50. 11; AV, II. 32. 1-6.

55. ibid., VIII. 20. 23-26; V. 53. 14; AV, IV. 13. 4.

56. AV, I. 4-6, 33; III. 7, 13; IV. 33; VI. 22-24

57. ibid., IV. 6; V. 13, 16; VI. 12; VII. 56; X. 4.

58. Aitarcyabrāhmaṇa, V. 22.

59. ibid., III. 40.

60. ibid., III. 19.

61. अथो नैरोधवक्ता वा एवो, यथातुस्वस्त्वमानः। तस्मादि श्रुतिः श्रुतिः, उपद्सन्तिः वे अभिविज्ञाते।
Gopathabrāhmaṇa, II. 1. 19.

62. यथा निषेधं तथा ह्राण।

63. VI. 5. 6.

64. II. 1. 19; IV. 2. 3, 30, 20.

65. R. C. Majumdar, Ancient India, p. 25.


70. *ibid.*, Vol. II, p. 587; *SS. Cikitsā. XIII. 14-17.*


75. *ibid.*, vol. I, p. 52.

76. *ibid.*, p. 49.

77. *ibid.*, p. 52.


80. *ibid.*


83. *Cultural Past - Essays in Early Indian History*, p. 1111.

84. *सामाजिकवृत्तात्मकाः यज्ञी Arthasastra*, Ch. III.


87. 'Brahmanization' as J. L. Brockington explains, 'as a literary technique of altering a text and a story in the direction of brahmanical orthodoxy'. (qtd. by Kenneth Zysk in *Mythology and the Brahmanization of Indian Medicine: Transforming Heterodoxy into Orthodoxy*, p. 3; www.hindu.dk/4ar/zysk2.pdf).

88. *India from the earliest ages - Hindu Buddhist and Brahmanical Revival*, vol. III of *History of India*, p. 5.

89. *ibid.*
90. An Introduction to the Study of Indian History, p. 20.

91. Kulikabhdatta, the commentator of Manusmrti, divided the ancient knowledge into two, viz., Tantric and Vedic by quoting Harita. (II. i).


94. N. V. Krishnankutty Varier, History of Ayurveda, p. 28.


98. According to CS, Ayurveda is divine origin from Brahma who revealed it to Prajapati who later on transmitted this knowledge to Asvins and they taught it to Indra. Indra imparted this knowledge to Bharadvaja. From him it is transmitted to Asteya Punarvasu who taught it to Agnivesa, Bheja, Jatukarna, Parashara, Harita and Ksarpam. As per SS, Dhanvantari acquired it from Indra. From Indra it is transmitted to Upadhenava, Vaikaran, Aurabha, Pauskalavata, Karavrya, Gopurarakshita and Sushruta. According to VagbhaTa's account, Asteya Punarvasu and other sages learnt it from Indra and they transmitted this medicinal knowledge to Agnivesa and others. (CS: Sutra 1. 4, 5, 30, 31; SS. Sutra 1. 3, 20; AH. Sutra 1. 3 - 4).


100. According to K. G. Zysk, the noble truth viz., suffering, its cause, its suppression and the method for its elimination correspond in medicine to disease, its cause, health and the remedy. (Asceticism and Healing in Ancient India, p. 38).


103. सृजृपुत्र च जेत्रक पुपुष्मानमयंसृजृपुत्र च CS. Sutra XIV. 28.


106. श्रवण पशु रक्षकर न पिण्ड्यो माध्यमिकः
परम्परांचिन्च श्रेयं महार्थं विशेषम्।।
*Uttaratantra*, XXXIX. 254- 55.


111. N. N. Bhattacharyya opines that 'This Nāgārjuna, who was also the reputed author of Kāśapaṭākāra and Ārogyaśānti and the redactor of Suvṛtāpanahā is dated to 8th century A.D. and was different from the famous exponent of the Mādhyamika system who was also Buddhist and his Rasaratnakara bears the stamp of Mahāyāna Buddhism'. (op.cit. p. 35).

Moreover the Chinese traveller Iṣuyan-tsang states that Nāgārjuna was contemporary to the sāvērānas and master in the science of alchemy. And there is another Nāgārjuna (Bhadanta), who was the author of Rasāyana an alchemical work of 7th century A.D. Thus it is very difficult to decide as to which Nāgārjuna was the real 'redactor' of SS. (For more details see P. C. Ray, *op.cit.*, pp. xcii- xcv).


114. *Indian Medicine*, p. 5.

115. Vāyupurāṇa, XLI. 66- 73.


117. qtd. by idem., *op.cit.*, p. 38.

118. *समाधिविग्न्यं गुरौर्तकलिकितात्* गुरुतमाला विन्दु: प्रेतिं यथा
तुच्छमेहनस्यावलीचन्द्रयात् सुविलासिनविनिर्माणयः।।
*Aṣṭāṅgaśāṇgara*, *Uttarasthāna*, I. 204.


121. For details see Subhash Ranade and Renuka Joshi, *A Text Book of History of Ayurveda*, pp. 166-176; T. J. S. Patterson, "The relationship of Indian and European practitioners of medicine from the sixteenth century" in *Studies on Indian Medical History*, p. 120.

122. *Encyclopaedia of Indian Medicine, Historical Perspective*, vol. 1, p. 3.