CHAPTER 2

ĀYURVEDIC PRINCIPLES
AND MODALITIES
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A. Ayurvedic Principles:

Hindu Philosophy believes that all wisdom and treasure of knowledge has directly descended from Lord Brahma, the Creator and mentor of all living beings on the surface of earth. This nectar, the divine knowledge and wisdom, is called the VEDAS. So the word Ayurveda therefore, Ayu meaning life, Veda meaning knowledge or wisdom, conveys the meaning Eternal Knowledge or wisdom of life. When we say the wisdom of life, it encompasses knowledge about both spiritual and material. The spiritual refers to good and favourable state of mind and soul. The latter includes knowledge about life processes. It tells the way that one should live and disseminate and practice this divine knowledge so that entire mankind takes benefits of it and leads a healthy and disease-free life. At the same time Ayurveda firmly believes that to derive full benefit of divine knowledge, the favourable state of mind and soul is essential and a must. According to Carak, the father of clinical medicine in Ayurveda, meaning

शरीरेन्द्रियसन्त्वात्संयोगे धारि जीवितम्। (Carak 1/42)

The state of mind, body and spirit together is called life.

हिताहितं सुखं दुःखमायुस्तस्य हिताहितम्।
मानं च तथा यथोत्तमायुर्वेदः स उच्यते॥ (Carak 1/41)

Ayurveda tells you therefore how to differentiate between the appropriate and inappropriate happiness and sorrowful conditions of living.
and what is auspicious and what is inauspicious for longevity as well as in the measure of life itself.

B. Objectives of Āyurveda

Āyurveda recognises the phases of life in human from birth to death what is called Avasthā: bālya, tārunya and vṛdha. So the ancient Hindu Philosophy bestows the duties of man viz. Dharma, Artha, Kāma and Mokṣa. The Dharma tells the ethics what one should do and what one should not. This preaching is inculcated right in the childhood when that age is not able to discriminate good and bad. The hidden philosophy in it is service to society, service to man and all living being without which your life has no meaning. This leads to the spiritual enrichment and thereby help in overcoming physical and mental stress. Subsequent principles are in keeping with the basic biological phenomena of the state of man. The mokṣa is the culmination of spiritual attainment.

Now the word Āyurveda is derived from Āyu meaning not simple life but embodies and conveys happy co-existence of the corporate body with all its organs, the mind, and the soul. This trinity when chooses to work to gether with happy concord, gives rise to a well knitted living world in general and living being in particular. According to Mhaskar and Watwe (1954) it acts on a single assemblage of a single plane both of these spheres of action form the subject matter for the working of science of Āyurveda equally and adequately well.

Thus in nutshell the objectives of Āyurveda is to establish and maintain the equilibrium of the bodily elements firstly through spiritual, which is innate that the individual has to attain or must possess and secondly the causal
where some external agent that inflicted upon the body and thirdly the corrective that is derived from the plants or animals or any other source such as minerals that the recipies is prepared.

C. Concept of Doṣa, Dhātu, Mala

Basic principles of approach to bodily ailment in Āyurveda is prescribed on Doṣa Dhātu and Mala. Although in Āyurveda the approach is wholistic and body is considered to be well knit one entity physiological descrimination is essential for every medical service differentiates the body anatomy based on functional differentiation.

According to modern medical science the body is made up of organic entities such as proteins, carbohydrates, fats, vitamins, minerals etc. And these are not only very essential components for body activity but there must be proper balance in them for smooth functioning of body activities. Āyurveda is not out of these science in believing in these principles. To understand the physiology of the body neatly ancient Rishis have divided this body into thirteen basic entities, out of which first three humours are called Doṣas. Doṣas meaning causitive i.e. those that cause disturbances in bodily functions of remaining ten constituents of the body (Astaṁga hṛdayam sutra 11/35, 1990) which have bearings on the body functions. They are called Dhātus. Dhātus are those bodily products which are constantly produced dissociated and regenerated to sustain body structure and function. Thus Dhātus in Āyurveda are Rasa i.e. plasma, Rakta i.e. blood, Maṁsa i.e. muscle, Meda i.e. fat or adipose tissue. Asthi i.e. bone, Majā i.e. bone-marrow and Śukra i.e. reproductive element.

According to Susūrta, Dhātus alone support the body while Doṣas are in
some and support the body provided they are in proper balance and hence they are designated as Dhātus (that sustain) The third entity mala is the product of the body activity that are exorted they are purīṣa - stool, mutra - urine and sweda - sweat.

The entire Āyurvedic science thus has developed, based on Tridoṣa theory meaning that these three Doṣas i.e. vāta, pitta and kapha are the three fulesums of the human body that maintain the human body activities. They govern the total physiology of the living being. Among the three essential constituents that not only pervaded the human body but even each cell of the body the Vāta is the acting force. Of course this has to be understood in an abstract way. The Pitta governs the activities of transformation that is the entire biochemical processes manifested in the body is governed by Pitta. While the Kapha is a binding force of all tissues like a cross stiches that bear the body. The smoothness required for the transport communication of body element is sustained by Kapha.

The Tridoṣa theory of Āyurveda has emerged by constant churning and contemplation for a long period during vedic time by Rshis. Therefore, it stored for all times and circumstances justifying the ancient need and also catering to the needs of modern period and future. As per the ancient writings the balance of these three elements is responsible for maintaining good health. Similarly imbalance of these may cause or lead to disintegration of the body ending into death of an individual (Astaṁghṛdaya sūtra 1-6/7).
D. Tridosha Theory

In the Tridoshas theory the first acting principle is Vāta. In the real sense this is the only moving principle in the body. Vāta is the force per-se. Though it is all pervasive in the body it is divided into five major categories according to the functions performing in the body. Its basic place of origin is supposed to be in the 'Pakwāsaya' or large intestine.

1. Vāta:

(a) The site of Vāta

According to Vāgbhata the sites of vāta doṣa are Pakwāsaya i.e. large intestine, Kati (waist), Ūru (thighs) Karna (ears), Asthi (bones) and Twacā (skin). Amongst them Pakwāsaya is the place of origin of Vāta doṣa. According to Vāgbhata, "Tatāsthāni sthitovāyū" (Va.Su. 11/26) meaning bones are the sites of Vāta.

In general, all Dosas and Dhatus are interdependent. Interestingly, Vāgbhata has traced the negative relationship between Doṣa and Dhātu so far as Vāta and Asthi are concerned. If Asthi increases in the body there is decrease in the Vāta while Vāta Doṣa increases when Asthi-Dhātu decreases (Garde, 1970).

(b) Physical Properties of Vāta

According to Vāgbhata, Vāta is Rukṣa (Dry), Laghu (light), Sheeta (cold), Khara (rough), Suksma (minute) and Chala (moving). Carak has
(c) Functions of normal Vāta Doṣa

The actions of Vāta on body and mind are described as follows:

The root of Doṣa, Dhātu and Mala of the body is Vāta. In its natural state, it controls exhalation, inhalation, movement and the discharge of impulses the balance and coordination of tissue functions above all the coordination of the senses. (Frawley, 1994).

(d) Types of Vāta Doṣa - their sites and functions -

Vāta Doṣa is present in each part of the body. Based on the sites and function Vāta doṣa is divided into five forms viz., 1) Prāna, 2) Udāna, 3) Vyāna, 4) Samāna and 5) Apana.

(e) Excess of the Vāta Doṣa

Vāta's actions when aggreved are collapse, spasms, piercing pain, numbness, depression, breaking, striking and biting pain, constipation, cracking of the joints, contraction, retention of waste materials in the body, excitability, thirst, trembling, roughness of skin, porosity of tissues,
dehydration, agitated movement, stiffness, astringent taste in mouth, dark or reddish brown discoloration.

(Vā. Su. 11/5-6)

(f) Deficiency of the Vāta Doṣa

Vāta when low causes lassitude of the limbs, deficiency of speech and enthusiasm, and confusion of perception, as well as increase in phlegm and the production of toxins (āma)

(Vā. Su 11/15)

(g) Functions of Abnormal Vāta Doṣa

When Vāta is disturbed and Vāta doṣa stems following symptoms are noticed.

Relaxation or enervation of the limbs, irregular movements, piercing pain, loss of sensation of an organs disfunctioning of the organs, neuralgic pains, throbbing pains, tearing pains, disability and dejection, splitting sensation of the limbs, contractions of the muscles, pinditwam (formation of hard mass as in the case of stools and stones in kidney), Harṣa (Horripilation), thirst, tremors, roughness (Pāruṣya), formation of bone cavities, drying or wearing, throbbing, wringing spasms, arrest of body
movements, production of astringent taste, and shadowing and darkening of skin.

(i) **Prāna Vāyu:**

Prāna means forward direction. Prāna Vāyu is mainly centred with head. It moves downward to the chest and throat controlling inhalation and swallowing, as well as sneezing, spitting and belching. It governs the senses, mind, heart and consciousness.

(Vā. Śū. 12/49-51)

(ii) **Udān Vāyu:**

Udān means upward direction. It is situated (located) in the region of umbilicus, chest and throat. It controls exhalation and speech. It is also responsible for memory, strength, will and effort.

(Vā. Śū. 12/56)
(iii) Vyāna Vāyu

Vyāna means diffusive or pervasive. It is situated in the heart and distributed throughout the entire body. It controls the circulatory system and through it, the movement of joints, muscles and the discharge of impulses and secretions are controlled.

(Va Śū 12/6-7)

(iv) Samāna Vāyu

Samāna means equalizing vāta. It is situated near the Pācak Pitta. It is moving in gastro-intestinal tract. It holds, digests, separates the food and controls excretion.

(Va Śū 12/8)

(v) Apāna Vāyu

Apāna means the downward moving vata. It is situated in the lower abdomen, bladder, penis, thighs and anus. It is mainly responsible for excretion of semen, menses, faeces, urine and foetus.

(Va Śū 12/9)
2. Pitta -

a) General sites of Pitta

Pitta is situated in the small intestine, stomach, sweat, sebaceous glands, blood, lymph and the organs of vision. It is primarily located in the small intestine.

पित्तं पश्चात्मकं तन्म पञ्चामायमद्यक्षयम्। (Va Sū 12/10)

b) Physical Properties of Pitta -

Pitta is slightly oily in nature. It is hot, sharp in action, liquid, sour (acidic in nature), capable of spreading and pungent.

पित्तं सस्तेहलीलीलोप्यं कल्यु विश्रामं सरं द्रवम्। (Va Sū 1/11)

c) Functions of normal Pitta -

Pitta governs digestion, heat, visual perception, hunger, thirst, luster, complexion, understanding intelligece, courage and softness of the body, pitta controls all aspects and the sharpness of body faculties (Teja) and warmth in the body and mind (Frawley 1992).

पित्तस्य वाह्रागोष्ठयां विभिन्नता:।
खेद: क्रेद: स्थूलति: कोशि: सदनं रूहिनं मदा:।
कुढळकामेस्सं रसों वणि: पाण्डुङ्गुणविभिन्तः॥ (Va Sū 12/51-52)

(d) Types of Pitta Doṣa - Their Sites and Functions

Pitta, though present all over in body it is divided into five categories according to their functioning ability.
i) \textit{Pacak Pitta}:

Pacak Pitta is one, which digest the ingested food. It is situated in between Āmāsaya and Pakwasaya. Though it is Paṁcabhautik in nature it is predominant in Tej Mahābhuta. Though it is called Agni the meaning the interfervent or in these desire or hunger for food, it is liquid in nature. It digests or separates assimilable and non assimilating parts as found. It also gives strength to all other types of Pitta.

\begin{quote}
करोति बल्कानेन पावकन नाम तत्स्मृतम्
\end{quote}

(Vā.Śū. 12/12)

ii) \textit{Ramjaka Pitta}:

It gives colour to the Ras Dhātu and turns into Rakta Dhātū. Therefore, it is called Ramjaka Pitta. It is situated in Āmāsaya.

\begin{quote}
आमासायाःश्रेष्ठं पित्रं रज्यकं रसरुखनात्
\end{quote}

(Vā.Śū. 12/13)

iii) \textit{Sādhaka Pitta}:

Sādhaka Pitta is situated in Hridaya (Heart and Brain). It allows and controls all events intellectual objectives. It also controls the mental functions. These include worldly goals of pleasure, wealth and prestige and the spiritual goal of liberation. It governs our mental energy, our power of thinking and expression as well as our power of discrimination.

\begin{quote}
बुधीमेधामिदात्मादैरस्मिन्येतर्यायंसाध्यतात्
साधकं हृदेन्तं पित्रं
\end{quote}
iv) Alocaka Pitta:

Alocaka Pitta is situated in eyes. It is responsible for reception of light and perception of image of the objective.

(v) Bhrajaka Pitta:

Bhrajaka Pitta is situated in skin. It governs lustre and complexion of the skin. Vāgbhata in his Astang samgraha adds that Bhrajaka pitta digests the massaged oil or any lepa that we apply on the skin. In other words it helps diffusion and assimilation of massaged oil or any other ethereal principles.

(e) Excess of Pitta Doṣa -

Pitta in excess causes yellow colour of stool, urine, eyes and skin, as well as hunger, thirst, burning sensation and sleeplessness. Excess Pitta results to the increased heat in the body.
(f) Deficiency of Pitta Dosa -

Pitta when deficient causes weakness in the digestive system, cold and lack of luster.

(g) Functions of abnormal Pitta -

Pitta causes burning sensation, red colouration, heat, excessive sweating, moisture, secretions, decomposition lowering of the functions (such as energy), fainting intoxication creation of pungent and sour taste and it brings different colouration of skin except white.

3. Kapha :

a) General sites of Kapha :

Chest, throat, head, lungs, joints, stomach, Aamāsāya, Rasdhātu, meda (fat), nose and tongue are the sites of kapha. Chest is the main site of kapha.
(Va. Su. 12/3)

b) Physical properties of Kapha

Kapha is basically Sheeta (cold) in nature. It is also Guru (high density) and Snigdha (viscous).

(Va. Su. 12/3)

c) Functions of normal Kapha

Kapha in its normal form gives stability to the body, supplies lubrication. It holds the joints together. It increases the qualities of psyche like patience, forgiveness catholicity and such other broad mental virtues.

(Va. Su 11/3)

d) Types of Kapha Doṣa, Their Sites and Functions:

Like Vāta and Pitta, Kapha is also divided into five categories according to its action.

i) Avalaṁbaka Kapha
ii) Kledaka Kapha
iii) Bodhaka Kapha
iv) Tarpaka Kapha and
v) Slesaka Kapha.
i) **Avalambaka Kapha**

It is situated in the chest. With its intrinsic power it nourishes Trik, all other forms of kapha at their sites.

(Verse: Va.Sū. 12/15-16)

ii) **Kledaka Kapha**

It is situated in Amāsaya (stomach) and it moistens the ingested food.

(Verse: Va.Sū. 12/17)

iii) **Bodhaka Kapha**

It is located in the tongue and it helps to know the taste.

(Verse: Va.Sū. 12/17)

iv) **Tarpaka Kapha**

This Kapha is situated in the head and it promotes the sites of senses of the brain.

(Verse: Va.Sū. 12/17)
v) **Slesaka Kapha**

It is situated in the joints and it holds the joints together. As it is known in joints there is synovial fluid which helps holding the joints together.

(\textit{Va.Sū. 12/18})

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e) **Excess of Kapha**

When Kapha is increased we have loss of appetite, excessive salivation, lethargy, heaviness, paleness, chills, languid, difficulty in breathing (asphyxia) cough and drowsiness.

(\textit{Va.Sū. 11/8})

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(f) **Deficiency of Kapha Dosa**

Deficiency of Kapha shows following symptoms in the body - giddiness, emptiness in chest, empty feeling of heart, languid joints.

(\textit{Va Sū 11/16})

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(g) **Functions of abnormal Kapha**

In its abnormal form Kapha creates excess stickiness, hardness, itching, chilliness, heaviness, obstruction to the systems, swelling, indigestion, excess of sleep, paleness sweet or salty taste to the mouth. All
diseases which are due to abnormal kapha are chronic or lingering in nature.

(Vā.Śū 11/8)

E. Pañcarāṇahābhuta

In ancient India during Vedic time, the rṣis conceived that in the beginning the world existed in an unmanifested state of consciousness. From that state of unified consciousness, the subtle vibrations of the cosmic undiscernable voice 'aum' (ॐ) took birth. From that vibrations there first emerged is the ether element. This etheral element then began to move. Its subtle movements created the air, which is again etheral in action. The movement of ether produced friction, and through that friction heat was generated. Particles of heat energy combined to form intense light and from this light the fire element emerged (Frawley 1994).

Thus, ether manifested into air, and it was the same ether that further manifested into fire. Through the heat of the fire, certain etheral elements melted and liquified, manifesting the water element and then solidified to form the molecules of Earth. In this way, ether manifested into the four elements of Air, Fire, Water and Earth i.e. from inanimates the animate has origined. From the matter earth, all organic living world firstly the plant kingdom, subsequently the animal kingdom, including man, are created. Earth also contains the inorganic substances that comprise the mineral
matter. Thus from the womb of the five elements all matter is born (Frawley loc cit.)

Man is a microcosm of nature and so the five basic 'elements' present in all matter also exist and constitute each individual. The vedic science believes that in human body there are many void spaces which existed as an out come of the manifestation of the Ether element. For example, the spaces in the mouth, nose, gastrointestinal tract, respiratory tract, abdomen, thorax, capilaries, lymphatics tissues and cells (Frawley loc cit.).

1. Āyurvedic Science and Āyurveda

तत्ष्योपयोगोदभिहिताश्चकित्सं प्रसति सब्बेदा ||
भूतेष्वोऽहि परं यस्मान्नास्ति चिन्ता चित्तिकाल्यस्ते ||
(Su.Sa.1/13)

There is nothing but Pāṇcabhidusas are thought everwhere. Space in movement is called air. Air is the second cosmic 'element', the 'element' that has mobility within the human body. Air controls the larger movements of the muscles, the pulsations of the heart, the expansion and contraction of the lungs and the movements of the stomach wall and intestines. The entire movements of the central nervous system are governed by bodily Air or Vāta.

The third element is Fire. The source of fire and light in the solar system is the sun. In the human body the source of fire is the metabolism. Fire works in digestive system. According to Pāṇcabhuta it manifests as intelligence or sharpness of mind. It also activates the retina which perceives light. Thus bodily warmth digestion, the thinking processes and vision are all functions of bodily fire.
Water is the fourth important element in the body. It manifests in the secretions of the digestive juices and the salivary glands, in the mucus membranes and in plasma and cytoplasm. Water is absolutely vital for the functioning of the tissues, organs and various bodily systems. For example, dehydration resulting from diarrhoea and vomiting must be treated immediately to protect the patient's life. Because this element is so vital, bodily water is called the water of life.

Earth is the fifth and last element of the cosmos that is present in the microcosm. Life is possible on this plane because Earth holds all living and non-living substances to its solid surface. In the body the solid structures bears cartilage nails, muscles, tendons, skin and hairs are derived from Earth.

The basic elements - Ether, Air, Fire, Water and Earth - are related to each other, having communication between them and together control touch, perception, vision, taste, smell such other bodily functions (Lad 1994).

2. Origin and inter-relationship of Pančamahābhuta

There are many hypothesis about the origin, development and growth of the world. Hindu philosophy, especially Śaṅkhya philosophy believes that this 'world' has its origin in the basic principle: 'Ātman' which is the replica of devine spirit, five elements viz. Prthvi, Āpa, Teja, Vāyu and Āakāśā constitute of this visible world, and so our body; perhaps it is one form of the world outside.
In Sruti it is mentioned that the Āakāśa is formed from the Ātman. From Āakāśa, Vāyu has origined. Teja is the next mahābhuta. It is born from Vāyu. From Teja, Āpa mahābhut was origined and from Āpa, Prithvi is created. These five mahābhutās are in atomic form. They come together to form the Mahābhuta. Each of them is having its own 'organ' of sense, and one.

3. Paṃcabhoutika Cikitsā

According to Āyurvedic philosophy our body is constituted of five elements. It is made up of Paṃcamahābhoutika and hence it is Paṃcabhautika in nature. The diet which we take which nourishes our body is also Paṃcabhoutika in nature. Eventually when they are assimilated they end up in Paṃcamahābhoutika providing energy and capacity for the body metabolism.

It believes that the fertilized ovum (The beeja) is the basic site of Paṃcamahābhutas. These mahābhutas nourish themselves deriving nourishment from mother. First Ākāśa starts creating void space in that ovum. As it continue to grow this void space increases. The ear, the intestines, the bladder are some of the examples of increasing cavities. In these cavities Vāyu starts moving, its basic site of origin is large intestine (Pakwāśāya). The Vāyu if starts increasing in the quantity, it causes harm to the body. As Vāyu is dry in nature it can diminish the foetus. At this juncture, Teja mahābhuta in the foetus starts taking nourishment from the mother. In Āyurveda Teja mahābhuta in our body is in a peculiar state. It is in the liquid form and is called Pitta. The natural direction of motion of the Teja mahābhuta is upward. But pitta in the intestine moves downward. Āakāśh, Vāyu and Teja mahābhutas if increase excessively they tend for destroy the
body. Āpa mahābhuta is created and situated at the top of all these. Āpa is Snigdha (oily or viscous) and sheeta (soothing or cold) in nature. It keeps the natural smoothness or lubrication required for the tissues. If Āpa mahābhuta is decreased in our body there is dryness in our body. In reality we also can feel the difference.

Lastly Prthvi mahābhuta is created. It is Guru, Sthula (visible) and Sthira (steady) in nature. It can bear all other mahābhutas. It helps working of brain. In other words intellectual capacity of the brain is controlled by it. Thus the five mahābhutas which are having extremely opposite qualities in them join hand in hand to work together in coordination. (Datar, 1990).

4. Qualities of Pancamahābhutas

These are in fact the qualities of the Dravyās.

The Dravyās (materials) which are Guru (heavy), Khara (rough or not smooth), Kathina (hard), Maṃda (slow), Sthira (steady), Visāda (cleansing), Sāndra (Luminous), Sthula (visible), Gaṃdha (odour) in nature are all Pārthiva in nature. They give strength, sturdiness to the body.

The Dravyās which are Drava (liquid), Sheeta (soothing or cold), Maṃḍa (slow), Mrdu (soft), Picchila (viscid), Sara (moving) and Rasa (taste) in nature are Āpya dravyās. They create Utkleda (mucoid secretion), Snehabāmdhan (cohesion), Nisyaṃda (secretion), Mārdava (softness) and Pralḥād (joy).

Ūsna (hot), Tiksna (sharp), Suksma (minute), Laghu (light), Ruksa (dry), Visāda (cleansing) and Roopa (light) are the qualities of Āgneya
mahābhuta. They create Dāha (burning), Pāka (digested), Prabhā (lustur) and Prakāsā (light) in the material.

Vāyavya dravyas are Laghu (light), Sheeta (cold), Rukṣa (dry), Khara (rough), Vishād (clinsing), Suksma (minute) and Sparsa (touch) in nature. They can create Rauksya (dryness), Glāni (giddiness), Vicār (excessive thinking), Vaisadya (clinsing property).

Lastly Aākāsiya dravyas are Mrdu (soft), Laghu (light), Suksma (minute), Slaksna (smooth). Sabda (sound) is their main Gunā. They create Mārdava (softness), Sousirya (hollowness) and Lāghava (lightness) in the body.

From Ākāsa serially all other mahābhutas are formed. So only in Ākāsa we can see the pure qualities. They are reflected in all other mahābhutas. In Prthvi mahābhuta all qualities of other mahābhutas are also reflected. So Prthvi is the base for all other mahābhutas. (Su Sū 41/3)

According to Āyurveda, baby is fed on the breast milk. It gets the Gurutā, Sthiratā (steadiness) and Sthulatā from parthiv part of the breast milk and from Āpa mahābhuta it gets Sheetatā (coolness), Snigdhatā (oilyness) and Dravatā (liquidity). Due to Āpa mahābhuta two tissues are bound together. In childhood there is increase in the properties of Kapha it means that there is excess of Prthvi and Āpa mahābhuta. According to Pāmcamahābhuta theory the increase in the body weight is due to increase in the two mahābhutas. This process is continued approximately upto the age of twenty five. At this age Teja mahābhuta starts increasing in the body. The digestive power increase. Body assimilates the food well digested by the Pācakāgni and there is gain in strength and musculature of the body.
There is enthusiasm, vigour. This stage lasts up to the age of forty-five to fifty. After that there is increase in Vāyavya qualities. Dryness of skin increases, strength decreases day by day. Prthvi and Āpa mahābhutās start diminishing from the body. This is declining stage. Slowly there is Pralaya (destruction) of the mahābhutās. Only Ātman is released from the body. Prthvi is dissolved in Āpa. Teja finishes Prthvi and Āpa. Vāyu gulps first three mahābhutās and these four mahābhutās get dissociated in Ākāśa.

Man is a replica of universe. This universe and our body both are Pāmcaḥbhoutika. All things which are present in the Universe are present in the body. In a way it fits into thermodynamic principle of modern science.

We can treat the diseases in two ways - one which is preventive to the disease (Hetu viparita) and the other one is over the disease (Vyādhi viparita). Hetu viparita means one which is against the etiological factor, e.g. if a man get fever by getting wet in rain, we can use ginger whose qualities are totally against that of rain and protests or prevents the disease. The other Vyādhi viparita means, we don't have to think of any etiological factor, but we can symptomatically treat the disease.

(a) Prthvi

Pāmcaḥmahābhutās, when they bear the body there is always a predominant quality which is seen in them. Other qualities support them in that work. In parthiv material Ghanatā (density) is seen as a predominant factor. It can be collaborated with either hot or cold, dry or oily, either heavy or light. The Ghanatā or the capacity of blinding is never changing. Due to this Ghanatā of Prthvi, Ghan qualities in the body also increase our body
weight increases due to this ghanatā only. Again this ghanatā is also relative. The Ghanatā of two different drugs is different.

(b) Āpa

Dravatā (liquidity) is guna of Āpa. Water of any taste is qualitatively one only. Its Dravatā is one. Dravatā means wetness. To keep the body moist is the prime function of the Dravatā. Due to different qualities, associated with this Dravatā, different qualities, required for the body are supplied. When body requires this Drava quality, we feel thirsty. If we eat sour, salty or pungent food which is again liquid in nature the digestive juice digest it. The liquid part, which is digested in our body is assimilated in our body. This Dravatā nourishes all the tissues by supplying hydration part to these tissues. This helps to keep the body away from excessive dryness.

(c) Teja -

Fire or hotness is the guna of Teja. Teja mahābhuta bears the body with its warmth. It is also associated with density, liquid, roughness or oily. Susrutaracarya has listed the qualifying factors of Teja mahābhuta as slightly sour, salty, pungent in nature. It has his natural downward and upward movement.

(d) Vāyu

Breathing is karma of Vāyu. With this function it bears the body. It supplies the Prāna which decides the life in the body.

(e) Āakāsā

Means space. The space is same all over. It is associated with dryness, roughness, softness etc. (Datār, 1990).
4.A **Role of Yakrit (Liver), Pleeha (Spleen) and Vrikka (Kidneys) in Pancabhautik Nidāna**

Liver, spleen and kidneys are the three prime organs in our body. However, in Ayurvedic texts one does not get much more information about these three organs. Wheateever information is available is in composed form.

In Ayurveda there is only one sentence regarding the liver and spleen (Su.Shar. 4/25) - घर्यंक्रूतस्मीतमि शोभितामि। The liver and spleen are formed out of Rakta only. As explained elsewhere that Rakta (blood) comes next to Rasa (i.e. Rasa, Rakta, Mrŏśa ...) If we see the formation of blood, naturally it is connected to Rasa, which is first digestive product of food that is digested. Food is digested by the Pācakāgni. This Pācakāgni digest food, which in Ayurveda is Pārthiva and Āpya in nature. So the condition or quality of Rakta (blood) is indirectly influenced or determined by this Pācakāgni. To create blood in its natural form or in any pathological form is depending upon this Pācakāgni. Prthvi and Āpa mahābhutas are in right proportion or balance, growth of the body is proportionate. If these Mahābhutas are either excessive or lesser i.e. if there is any imbalance in them, both conditions lead to death. Excess of ingestion of Pārthiva and Āpya diet, leads to diminished Teja Mahābhuta. This diminished Teja Mahābhuta can not digest further. This leads to the diseased state of body.

Due to these excess Pārthiva and Āpa mahābhutas also there is imbalance of Tridoṣas. The Malas are also disturbed. They are stored in the body because of that, secretions of liver are imbalanced. If this process
continues, we get slight tenderness over the right hypochondriac region (liver area) and symptoms of fever, constipation, cough, headache, cold are seen in this condition. Slowly this leads to increased obstruction to the Pitta. The Dhātus like Rasa and Rakta, which are totally dependent upon the Pāčakāgni also get disturbed and start showing pathological symptoms. As liver and spleen both are formed from blood spleen also gets diseased. Fever rises, dyspepsia also increases.

According to Āyurveda, Rakta (blood) is formed through liver and spleen despite basic difference in their functions. Liver has got its secretory ducts. Bile is secreted in the intestine while spleen has got no such system. Therefore, in diseased state spleen suffers more.

Kidneys are formed from the Sāra part of Rakta and Meda (Su.Sa. 4/31). Meda has one quality as strength. Meda gives strength to the kidneys. Meda is also Snigdha. So with its snigdha guna it protects the kidney from the toxins. In the pathogenic condition of kidney or when toxins accumulate in the kidneys, following symptoms are seen:

1) Cramps in the limbs 2) evening rise in temperature 3) urticaria 4) hyperacidity 5) pain in testes 6) heaviness in head 7) constipation 8) cough 9) Dyspnoea. (Datār, 1990).

5. Āyurvedic approach to the problem and its limitations:

Āyurvedic scholars have thought over this problem from many angles. In the present Āurvedic literature, we don't see any single diagnostic approach or symptomatology which will cent per cent match the present symptomatology.
However, we will consider here all the symptoms which have relevance to the cervical syndrome.

In Ayurveda there are two main types of diseases viz., 1) Swatantra Vyādhi and 2) Paratantra Vyādhi.

1) Swatantra Vyādhi - Swatantra Vyādhi or independent diseases are those who have got their own etiology, pathology. They are cured by their independent treatment.

2) Paratantra Vyādhi - Paratantra vyādhi or complications of main disease. They are cured by the treatment of main disease. Sometime they require their independent treatment.

While thinking over spondylosis, two separate categories of diseases are seen where Manyāstānibha and Katigraha are complications of other diseases respectively.

In Madhavnidāna there are six different conditions where Manyāstānibha is seen as a complication of other diseases, but precisely they do not point towards spondylosis. These conditions are Grahani (M.N. 7/4), Hikkā Swasa (M.N. 27/12), Vātvyādhi (M.N. 46/22), Vajśvāci (M.N. 12/5), Vātrakta (M.N. 1/23), Udāvarta (5/27). One more condition described as; Marpyāstānibha is due to prohibition of sneezing. This can be the cause of Manyāstānibha; but its direct relation with spondylosis is not yet known.

In lumbar spondylosis the conditions like Kati and Trikgraaha are seen. It is also counted as one of the eighty Vātvyādhis. These conditions are Jwara (fever) (M.N.37/1); Grahani (M.N.7/4); Sangrahani (M.N.1/4); Arśā (M.N.12/5), Gudamāsāyasthita Vāta (M.N.12/22), Pakwāsāyasthita Vāta (M.N. 14/22),

a) Manyāstaṁbha:

मन्यास्तम्भम् तदादुक्षिणत्यायमसामालेम् ॥

This clearly indicates that Antarāyāma is not related to symptoms of cervical syndrome.

Susṛutacārya has expressed totally different explanation to it. He has counted Antarāyāma in Apatānaka. He has mentioned Apatānaka of three types: 1) Dandāptānaka, 2) Antarāyāma and 3) Bahirāyām. Antarāyāma is Dhanustambha (Tetanus) (Su.Ni. 1/52-58).

Therefore, it is also called as above. The patient suffering from Antarāyāma, knowingly or unknowingly keeps grinding the teeth, he has excessive salivation, stiffness of the back (backward bending of the back) difficulty in the movements of head (excessive) yawning, and difficulty in opening the mouth.

It means that Vāta situated in the neck when enters the internal muscles it stiffens the neck. It is also called Antaryāma. It bends the neck forward. The patient suffering from Antaryāma, knowingly or unknowingly keeps grinding the teeth, he has excessive salivation, stiffness of the back (backward bending of the back) difficulty in the movements of head (excessive) yawning, and difficulty in opening the mouth.
(B) Causes of the Manyāstambha:

Day time sleep, sitting in a awkward posture, looking upwards in an unusual angle are the causes of Manyāstambha. Here Vāta is covered by Kapha. Some scholars mention it as a presymptom of Apatānaka.

There are also certain other symptoms which can be mentioned here -

(c) Asthyāvrittta Vāta:

When Vāta is covered by Asthi, there is urge for hot touch, urge for massage, bodyache, weakness and pinching sensation in the body.

(d) Kaphavrittta Prāna:

When Prāna is covered with Kapha, there is weakness, laziness in all physiological functions, giddiness, discolouration, excessive sputum, loss of taste (Aruci), vomitting, sneezing, nasal blocking and difficulty in breathing.
(e) Kaphavritta Udān:

When Udāna is covered with Kapha, there is discoloration, change in voice, weakness, heaviness (laziness) of the body, loss of taste, these symptoms are seen.

(f) Kaphavritta Vyāna:

When Vyāna is covered with Kapha, there is heaviness of the body, pain in all joints and bones. It is seen that in this condition there is disturbance in physiological functions.

(g) Viswaci -

(Su.Ni.1/75)
6. The three ways of diseases (Trayo Rogmārga)

According to Ayurveda there are three ways of diseases.

(a) Bāhya Rogmārga:

दारीदर्शक्रद्यानन्तर प्रायश्चित्विद्धीप्रकरणमित्वाति -
अन्त्यपरिमार्जनं, लहिःपरिमार्जनं रास्त्रेणिधिरं चैति।

तद्रायपरिमार्जनं यथावचारस्तूमनुसा०प्रविष्केश्यां राजन्यादिन्तिनृ धारणी।

प्रमादिति, वत्सलः प्रविष्केशयामां ताहेष्येकोम्बन्दितसेरामयानु धारणी।

तद्रायपरिमार्जनं स्त्रियाणं सुन्दरक्षिणार्यानमेदनाब्धान्यायादि राजन्यादिन्तिनृ

वेयोत्तापानुप्रच्छन्नीवेयोत्तापानुप्रच्छन्नी जलोक्षा।

(वा.सु. 12/44-45)

(b) Madhyama Rogamārga:

श्रीरूद्योगस्त्रादिमार्गण्यस्थिं च संविधान:।

तन्त्रिविद्या: श्रीरास्त्रायुक्तकराधाम् राजस्थ:।

रोगमार्ग: क्षितिस्तम्भ यक्षमक्षवधादिता।।

(वा.सु. 12/47/49)

This is also called as Madhya Roga Marga (middle way of diseases).
Vāta which is in the lumbar region, affects the Kaṇḍara in the Sakthi i.e. thigh, and creates Khanja. Due to this he starts leaping on one foot. When both the legs are affected, it is called as Pangu.

Kalāyakhania:

प्रक्रामन्ते यस्य खर्चनिभ्य गच्छति।
कलायखानं ति विद्याः उक्तसन्धिमिर्बन्धनम्।

(Su.Sā.1/78)

A man, while starting to walk, gets tremors in his leg, it is called as Kalāya Khanja.

5. Three types of Medicines:

(a) Antaparimarjan:

The medicine which is taken internally in the body to cure the disease is called Antaparimarjan.

(b) Bahi Parimarjan:

The drugs which are applied externally are called Bahiparimarjan. Ointments, Lepas are included in it.

(c) Sastra Pranidhān:

Use of surgery is called Sastrtaparanidhāna. All surgical diseases are counted in it. It also includes the use of Ksār, Jaluka (Leeches) etc. (Caraka Sū. 11/55).

The treatment used as swadanstradi Guggul and Padmaka Kitta is Antaparimarjan medicine.
The nerves (Brachial-ulnar/radial) when lose their functions is called Viswaci. It is a diseased condition. This condition can be seen in the paralysis of the nerves, frozen shoulder and other conditions.

(h) Avabāṅuk -

अण्डदेशस्थितो वायु शोषथित्वा सचल्दन्वम्।
सिराधारुकेश्व तत्रस्यो जनमाण्डलबाहुकम्॥

(Su.Ni.1/82)

The Vāta situated in the scapular region creates atrophy of the hand. It is called Avabāṅuk.

When we think of Lumbar spondylosis, there are few conditions which have one or other similar symptoms like Lumbar spondylosis:

Gridhrasi -

पाणिप्रमुखालीया तु कण्झरा यागनिलांकिता।
सक्षः क्षेष्य निगुणायादंसिद्धिः हि सा स्वर्दता॥

(Su.Sā.1/74)

It is similar to the sciatica in the modern science. The Kandara which goes up to the heel and toes, when affected by Vāta, makes difficulty in movement of the thighs. This is called as Gridhrasi.

Khania and Pangu

वायु कट्या स्थित: सक्षः कण्झरामक्षिपिच्छः॥
रख्यस्वदा भवेजन्तु: पुज्यो सक्षः त्रित्योवधशाह॥

(Su Sā. 1.77)
Marma means the vital points in the body if hurt, either temporary, partial or permanent damage to the body is there. Sometimes death occurs. It includes heart, urinary bladder etc. Bones and joints are also included in it. The muscles and tendons are also counted in the same.

(c) Antarmārga:

अन्तः कोल्पो महास्त्रेऽत आमपक्षायायान्यः ।
तत्स्थानादछृद्दीसाकास्मकासंस्वस्ववर्ज्जवाः ॥
अन्तःभागाँ च कोल्पायुविशिष्यत्यविद्विधिः ॥

(Va.Śū.12/45-47)

This is third Roga mārga in the body. It is called as internal way of disease or Abhyantara Rog Mārg. It includes gastro intestinal tract.

Cervical spondylosis is concerned with bones and joints. So it is the disease of Madhyama Rog Mārga.

7. Sāmānya Vīseṣa Siddhānta:

सर्ववा सर्वभावानां सामान्यं वृद्धिकारणम् ।
हस्तेःपृविशेषत्वः प्रवृत्तिक्षमयस्य तु ॥

(Ca.Sū.1/44)

Sāmānya Vīseṣa Siddhānta is a special hypothesis seen in the Āyurveda.

In general sense it means that all the similar things increase the similar things and things which are opposite in qualities decrease each other.

सामान्यमेकत्वकरं विशेषस्तु पृथक्त्वकृतु ।
तुल्यायतीता हि सामान्यं विशेषस्तु वियायितः ॥

(Ca.Sū.1/45)
(a) Marma:

According to Ayurveda there exist posteriorly two important marmas. They are: (i) Krikātika and (ii) Vidhura.

i) Krikātika - It is present at the junction of Sīra and Griva (Su.Sa.6/27). It is a sandhi marma (Su. Sa. 6/7). They are two in numbers (Su. Sā. 6/6).

ii) Vidhura - It is situated at the back and lower side of the ear (Su Sā. 6/27). It is a Dhamanigata marma.

Anteriorly also there are three very important marmas present in the neck. They are: (i) Neelā (ii) Manyā and (iii) Sirā mātrukā.

(iii) Neelā - These are two in numbers. They are situated at both the sides of the neck.

(iv) Manyā - These are also two in numbers.

(v) Sirā mātrukā - To the both side of the neck there are four sira mātrukā marmas present. It is Sadhyamarana marma i.e. when cut it leads to death immediately.

(b) Pesi:

There are four pesis in the neck (Su. Sā. 5/37)

अत उद्ध दोषकालबलादीन्वेद्य कषायालेपयात -
बन्धावराचारानु विद्ध्यात

(c) Kandara:

The muscle begins at the neck travels downwards the chest extends till medhra (penis) (Su.Sā. 5/11)
In all the given time all the existing matters follow the rule e.g., if we eat mutton, it will increase the muscles in our body. This rule follows in the similarity of matter, quality and functions.

(a) Asthivaha Srotas Duṣṭi Hetu:

Etiology of the Asthivaha Srotas -

The Asthivaha Srotas is diseased by excessive exercise, excessive irritation of bones or injury to the bones. It is also disturbed by diet, activities, which are responsible to increase Vata.

8. Sarīra Racana: as viewed by Āyurveda:

So far body anatomy is concerned, Āyurveda does not differ from the modern science so also with respect to the origin and anatomical changes occurring in the ailment. However, the terminologies vary.

In cervical spondylosis, bodily changes related to spine take place, so we must know the anatomy or Sarīra Racana of the cervical spine. The grīvā (neck) is a structure which links the head (sirā) to the rest of the body. Therefore, it is an extremely important organ in view of its anatomy and function (Nānal, V. General discussion).

There are in all seven vertebrae in the neck. They join skull to the thorax. They bear the load of skull and mastiska (brain). This part of spine has its natural curvature.

Serially we will see all the elements which are concerned with the neck.
Asthi is a paternal element Pitruj (Su. Sā.4/33). According to Pancabhaumitik Cikitsā it contains Prithvi and Vāyu Mahābhutas (Sus'ruta 15/8 Bhānumati Tīka). It contains more elements of Prithvi so it is Parthiva (Vā. Sū. 9/2).

(a) Functions of the bone:

The basic function of the bones is to give stirdyness to the body and to nourish the bone marrow (Su.Sā. 15/5).

The total structure of our body is dependent upon the bones. Skeleton gives strength to our body. Muscles are attached to the bones by ligaments. Bones cover the marmas inbetween them and thus protect them from any external trauma e.g. spinal cord is protected by the vertabrae (Su.Sā. 5/21-26).

(b) Site of the Asthivaha Srotas:

The basic location of Asthivah srotus is fat (medomulam) and lumbosaral region (Jaghan).

(c) Formation of bones and their forms:

From the diet, which we have taken Ras Dhātu is formed. From Rasa dhatu, Rakta is formed, from Raktadhatu (blood), muscles or Māmsa Dhatu is created. From Māmsa, Meda, Dhatu and from Meda, Asthi is formed. (Ca.Ci. 15/16).

According to Dalhanacārya, Purishadhāra Kāla is same as Asthidhāra Kāla (Su Kalpa 4/40 Dalhan)
(d) Kurchā :

There is only one kurcha present in the neck (Su.Sā. 5/13).

(e) Asthi :

There are 63 Asthis in the neck (Su.Sā. 5/18).

(f) Sanghāt : 

There is one Sanghāt in the neck region. (Su.Sā. 5/16)

(g) Sandhi :

There are eight types of joints in our body. In cervical region there are joints inbetween the surfaces of vertebrae. They are called as Pratara Samdhis. (Su.Sā. 5/27)

9. Asthi-Tridosha and Pancamahabhuta :

According to Ayurvedic theory the diet we take is made up of five basic elements viz., Prithvi, Āpa, Teja, Vāyu and Ākāsa. This Pārthiva, Āpya, Tejas, Vāyaviya and Ākāsiya diet is digested in our body by Pācakāgni. From this process serially seven Dhātus are created. They are Rasa, Rakta, (blood), Mamsa (muscles), Meda (fat), Asthi (bones), Majjā (bone marrow) and Sukra (semen). So in this sequence Asthi is the fifth Dhātu in our body.
(d) Number of bones:

According to Caraka there are 360 bones (Ca.Sa. 7/6) in our body, but Acaryas from Dhanwantari Sampradaya or Salya tantra they count them as 300 only. (Su. Sa. 5/18). The classification of the bones is as follows:

1) Extremities 120
2) Sacrum, flanks, back and chest 117
3) Neck and above 63

300

Among the 63 bones of neck and above, Susrutacarya has counted eight bones in the neck (Su Sa. 5/26) alone.

(e) Types of bones:

According to Ayurveda there are 5 types of bones in the body. They are -

1) Kapalasthi 2) Rucakasthi
3) Tarunasthi 4) Valayasthi
5) Nalakasthi

The relationships of them are -

1) Knee, buttock, scapula, cheeks (Ganda), pallet (Talu), eye, and head, these parts are made up of Kalpalasthi.

2) All teeth are Rucakasthi

3) Nasal bones, ear bones and bones from the optic cavity are Tarunasthi (cartilages)

4) Flanks (parswa), back and chest are having valayasthi.
5) All other bones i.e. long bones are Nalakāṣthi.

(f) Asthi Ksaya Symptoms:

When degeneration (ksaya) of Asthi Dhatu takes place. There is pain in bones and the teeth and nails start cracking and there is dryness of teeth and nails (Su.Su.15/9). To these deformity is added fall of hairs (Ca.Su.67/17)

(g) Excess of Asthi Dhatu:

If Asthi Dhatu is excess, excessive growth of bones takes place. Number of teeth increase and hairs and nails grow in much more proportion.

अस्त्यिक्षरस्यान्वायकार्यदन्ता व, मण्डा सुप्रोद्रोहोपर्वाच, ।
शुरु बुआसमरसकिन्त्रादिविचिन्तय च।

(Su.Su.15/14)

(h) Etiology of the diseases of the bones:

Excessive exertion or exercises, excessive mental stress, excessive traumatic injuries to bones and diet increasing vata in our body, are the causes of the bone diseases.

व्यायामादृतस्कृतोमादस्यामतिविषयकत्नात् ।
अस्थिवाहनीति दुख्यति वातलातां च सेवनात्तै॥

(Ca.Vi.5/17)

10. Ayurvedic treatment given for cervical spondylosis and its limitations.
Various scholars are using various types of treatments for cervical spondylosis, out of which the treatments which are published, we will consider them.

(a) Basti -

As cervical spondylosis is considered as Vāta Vyādhi (disease) basti is the prime treatment of the diseases. Total 30 bastis are recommended. 3 Anuvāsana bastis of Balā Tail and Mahālākṣādi Tail.

Niruha Bastis prepared from Tikta substances e.g., Guduci Kshirpak.

(Nānal Vilas - general discussion)

(b) Nasya -

For Nasya Balā Taila, Aswagandhā Tail, Maśasaindhava Tail are used. The Usna, Snidgha gunas of Taila subdue the Sīta, Rukṣa, Khara, Gunas of Vāta. Before Nasya or Basti, Swedana is essential.

The use of Yamaka Sneha proves useful. Yamak Sneha is a combination of two snehas. Yamak Sneha can also be used from outside.

In Ayurveda for each disease there are basic two types of treatment.

(c) Sodhana Cikitsā -

When the doṣas in the body are in more proportion, sodhana cikitsā is used. Sodhana cikitsā takes out the doṣas out of the body. Basti and Nasya are the 2 sodhana cikitsas used in the cervical spondylotic treatment.
(d) Samana cikitsa -

When by sodhana cikitsā dosas are lessened, for the rest of the doṣas saman cikitsa is used.

Internally Guggul Kalpās are used. To quote them - Lāksadi, Ābhādi, Mahāyogrāj, Kāncanara guggul, Punarnavā guggul.

Gandharva Haritaki is used as a virecan (purgative). Some scholars use Jivaniya Gana for the treatment, but the exact dose and the mode of treatment is not written.

In Curna section Lavanbhāskar or Hingāstaka curna is used.

In other groups, AswagandhāKṣirpāka, Aswagandhāriṣṭa and Sameerpannag Rasa are used.

(e) Snehan:

In external treatment, Mash saṁdhāv tail is used to apply it from outside. Mahānārayan tail, Aswagandhā Bālā tail are also used to apply externally.

(f) Swedana:

Nādi sweda of Nirgudi or Daśamoola vapours is used. Pinda sweda, Upnaha sweda or Dhārā sweda are used according to their requirements. Some scholars have taken trials of Nirgundi Patra Pinda Swedan with very good results