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**Dr. Ami Rajani**  
 Assistant Professor,  
 Department of Physiology,  
 Govt. Akhandanand Ayurveda  
 College, Ahmedabad, Gujarat,  
 India.

**Dr. Vaibhav Dadu**  
 Assistant Professor,  
 Department of Basic  
 Principles, Govt.  
 Akhandanand Ayurveda  
 College, Ahmedabad, Gujarat,  
 India.

## ***Panchmahabhoota- The base of the ayurveda W.S.R to Shalakyia Tantra***

**Dr. Ami Rajani, Dr. Vaibhav Dadu**

### **Abstract**

The concept of the *panchmahabhoota* (five gross elements) is a widely acclaimed theory of Indian Philosophy and *Ayurveda*, the traditional Indian science of medicine. This theory is the base of the *Ayurveda* model of health. The cause of disease is also attributed to the imbalance of these elements as they form the basic entities of the *dosha*, *dhatu* and *mala*. The *shalakyia tantra* in *Ayurveda* deals with the diseases of the supraclavicular region of the body. The *panchmahabhoota* play a significant role in understanding the physiology, pathology and planning of the treatment in the diseases of this region. This paper decodes the *panchmahabhoota* with a special emphasis on the applied aspect of the same in the diseases studied under the *shalakyia tantra*.

**Keywords:** *Panchmahabhoota, Ayurveda, Physiology, Pathology, treatment.*

### **1. Introduction**

The Indian philosophy or the *Darshan shastra* is the source of the origin of a number of basic principles of *Ayurveda*. Amongst these concepts, the very important concept of *Panchmahabhoota* (the five basic gross elements) it is accepted by all the seers of yore. This is therefore the *Sarvatantra Siddhanta* <sup>[1]</sup>. These five elements form the base of each and every substance in this world but unfortunately they have not been utilized to their potential especially in the different treatment procedures in *Ayurveda*. The famous *Ayurveda* surgeon, *Sushruta* has quoted that if anybody knows *Panchmahabhoota* well, he shall have nothing to worry about the treatment <sup>[2]</sup>. Relation of *Panchmahabhoota* with the *Ayurvedic* basics of *Rasa, Dosha et al.*, is conspicuous by its presence in the classics of *Ayurveda*. Therefore, the *Panchmahabhoota* are the base of thinking of all the eight branches of *Ayurveda*, <sup>[3]</sup> including the *Shalakyia Tantra* <sup>[4]</sup>. The role of *Panchmahabhoota* in *Shalakyia Tantra* has not mentioned directly in the classical texts of *Ayurveda* except *Panchmahabhoota* in context of the anatomy of the Eye <sup>[5]</sup>. Hence here a small effort has been made to understand and review the etiopathology of diseases of *Shalakyia Tantra* in context of the basic elements, *Panchmahabhoota*. The *Vaisheshika* school of *Kanada* has proposed the six categories under which the *dravya* includes the *Panchmahabhoota* <sup>[6]</sup>.

### **2. The Panchmahabhoota- All Pervading Elements**

All living or non living substances of universe is made by five basic elements i.e. *Panchmahabhoota* <sup>[7]</sup>. The all pervading nature of the *Panchmahabhoota* can be gauged by the presence of the same in the smallest particle known as atom. If atom is *panchabhautika* then it per se validates the universal presence of the *Panchmahabhoota*. These *Panchmahabhoota* can be identified in the universal entities through their characteristic properties and manifestations. The whole world is in fact the transformation of the *Panchmahabhoota*. Each of the five *mahabhoota* has its own specific subjects known as *Artha - Vishaya* i.e. *Akasha- Shabda, Vayu - Sparsha, Agni - Roopa, Jala - Rasa* and *Prithvi- Gandha* <sup>[8]</sup>. This can be best understood through the application of the *anvay - vyatirek vyapti*. This implies that wherever *Shabda* (sound) is present, *Akasha* is present and vice-versa. Similarly other four *mahabhoota* can be understood. The specific characteristic of each *Mahabhoota* <sup>[8]</sup>, is the sign of manifestation suggesting its presence. Specific character of *Vayu* is *Chala* (movement), *Agni - Ushna* (hotness), *Jala - Drava* (fluidity), and *Prithvi - Khara* (roughness) and can be easily understood but *Apratighat* (Non resistance) of *Akasha*

### **Correspondence**

**Dr. Ami Rajani**  
 Assistant Professor,  
 Department of Physiology,  
 Govt. Akhandanand Ayurveda  
 College, Ahmedabad, Gujarat,  
 India.

needs to be clarified. *Apratighat* means unobstructed. For example, if one can move his hand in Air it shows *Apratighat* which is further indication of presence of *Akasha*. Though *Vayu* is also there but if *Vayu* is increased, it becomes difficult to move the hand. i.e. moving of hand out of fast moving train. Hence *Apratighat* is the specific sign of *Akasha* and cannot be linked with any other *mahabhoota*.

A substance is utilized due to its function and functions of *Panchmahabhoota* have not been mentioned directly but the function of substance dominant in particular *Mahabhoota* has been proposed by the revered seer *Charaka*. It has been quoted that the *dravya* which has dominancy of *Akasha* produces the *Mardav* (Softness), *Saushirya* (Porosity), *Laghava* (Lightness) in the body. *Vayu mahabhoota* dominant *dravya* produces the *Raukshya* (dryness), *Glani* (Exhaustion), *Vichara vaishdhy* (Calmness). Similarly *daha* (Burning sensation), *Paka* (Digestion), *Prabha* (lusture), *Prakasha* (brightness) and *Varna* (Complexion) is the function of *Agni mahabhoota* dominant *dravya*. *Dravya* which has *Jala mahabhoota* dominance does *Upakleda* (moisture), *Sneha* (lubrication), *Bandha* (Binding), *Vishyandana* (Flowing), *Mardava* (softness), *Prahlad* (Pleasure). *Parthiv Dravya*, on the other hand produce *Upachaya* (Growth), *Sanghat* (Formation of compounds), and *Gaurav* (heaviness), *Sthiratva* (stability) in the body [9].

After knowing the specific quality, characteristic and actions, it is validated that presence of *Panchmahabhoota* in all substances of universe is essential. In Atom Electrons are moving in its axis due to *Apratighat* (non-obstruction) of *Akasha*, Moving itself indicates *Vayu* (*Chala*), Anions and Cations having positive and negative charges which shows *Agni Mahabhoota*, they bind together due to *Jala Mahabhoota*, weight of that particular atom shows *Prithvi* in Atom. Similarly in a cell also, the Cell wall represents *Akasha* (porous) and *Vayu* (exchange of ions), while mitochondria is known as Power house of cell which is correlated to the *Agni Mahabhoota*, cytoplasm has dominance of *Jala* and the nucleus can be understood to be dominant in *Prithvi Mahabhoota*.

Evolution of *Panchmahabhoota* described by *Acharya Charaka* is in chronological order which is *Akasha- Vayu- Agni- Jala- Prithvi* [10]. The dissolution of *Panchmahabhoota* has been described in *Nirvana Tantra* which is reverse than evolution i.e. *Prithvi- Jala- Agni- Vayu- Akasha*.

### 3. The Application of the *Panchmahabhoota* in *Shalaky tantra* -

The concept of *Panchmahabhoota* can be studied in its applied aspect in relation to the *Shalaky Tantra* with reference to the functioning of senses during sleep. In the definition of sleep, *Charaka Acharya* has mentioned that all the senses in the state of sleep do not have any contact with their respective subjects [11]. Waking stage can be correlated with the evolution theory where the ear contacts with its subject which is the sound (*Shabda*) and related with *Akasha mahabhoota*. Whenever a person is awake he always experiences some sound. Second sense which gets activated is the *Sparshendriya* or the skin. Dissolution theory of *Panchmahabhoota* can also be correlated with the sleeping condition. In the state of the *Tandra* (pre-sleeping condition), the ear is the last sense organ which gets switched off. In this condition of *Tandra* one can perceive the Sound, but cannot perceive the words spoken. In both the conditions, *Prithvi* is the last in evolution and first in dissolution which is well understood in the concept of sleep in modern science which

states that Olfaction is totally absent in the state of sleep. So a person cannot perceive any kind of smell during sleep hence fire alarm has been put at the fire zone.

*Shalaky Tantra* basically deals with sense organs known the *Jnanendriya* in Sanskrit parlance. While describing the relation between *Jnanendriya* and the *Panchmahabhoota*, *Charaka Acharya* opines that all the five senses are made up of *Panchmahabhoota* but the dominance of one *Mahabhoota* should be accepted in each sense organ like the ear (*Shrotrendriya*) is dominant in *Akasha et al*. This can be further useful in understanding the manifestation of disease and its treatment. In the ear, *Akasha* is dominant in comparison to other senses and the other four *Mahabhoota* are the supporting factors. Movement of tympanic membrane in ear shows *Apratighat* of *Akasha*. Without *Akasha* membrane cannot vibrate. Similarly in Eye, rods and Cones have the dominance of *Agni*, Salivation around tongue shows dominance of *Jala Mahabhoota* while anatomy of nose especially the cartilages indicate the *Prithvi Mahabhoota* dominance.

In concept of *Indriya Panchpanchaka* (five points related to the five senses) [12], mentioned in the classics can be applied in understanding of the diseases and the treatment of the sense organs. The *Panchpanchaka* comprises of the five senses or *Panchendriya* which perceive the object, the substratum of the senses known as *Panchendriya dravya* namely the *Akasha, Jala, Agni, Jala,* and *Prithvi* by which treatment is carried out as the of the *panchamahabhoota* is compulsory in all the substances, the *panchendriya adhishtana* i.e. the site of the senses namely the two ears, two eyes, one nose, one tongue and all pervading skin. These sites are the examination points for the physician like the otoscopy and rhinoscopy. They are the site of manifestation of the disease. In the *Indriya Panchpanchaka*, next is the *Panchendriya Artha* i.e. the objects of the senses comprising of the *shabda, sparsha, roopa, rasa and gandha*. Followed by the *Panchendriya Artha* is the all important concept of the *Panchendriya Buddhi* i.e. the knowledge produced or the cognition. The causative factors of the disease includes the insufficient/deficient contact of the object with the sense known as *heena yoga*, the improper or non-judicial contact known as the *mithya yoga* and the excessive contact known as *ati yoga* [13].

*Panchmahabhoota* play an important role in the physiology of the body and the sense organs which is visible in the form of pathological manifestations. The site of the sense organs is the point of manifestation of the signs and symptoms of the disease. *Shrotrendriya* and its site of ear have dominance of *Akasha* as mentioned earlier. Hence it can be said that the Impairment in its function will also be attributed to the same *Akasha*. Decreased or increased *Akasha* will be main reason for all types of *Karna Roga* (ear diseases). Increased *Akasha* suggests the perforation leading to the increased porosity or *saushirya* like the perforated Tympanic membrane that loses its ability to vibrate just as the perforated drum. Causative factor for the *Akasha Vriddhi* is mainly the *agni* having the *ushna-tikshna guna* and the dry (*ruksha*) *Vayu*. This pathology is rectified with the intake of *ghee* (*ghritpana*), *rasayana, avyayam, brahmacharya* and *abhashanam* [14]. This treatment mainly deals with correction of the *Vayu* and *Agni Mahabhoota*. In an opposite case, if *Akasha* decreases it means the diminution in *Apratighat* like the bulging of tympanic membrane which again involves the malfunction of the vibration of tympanic membrane. Causes for the *Akasha Kshaya* i.e. the diminution of the *Akasha* will be the either

*prithvi* comprising of the stable (*sthira*) and heavy (*guru*) attributes like the ear wax or *Jala* comprising of the fluid (*drava*) and unctuous (*snigdha*) attributes seen in the cases of secretions from the ear (*karna srava*)<sup>[15]</sup>. The treatment module comprises of the use of the drugs or methods dominant in *Agni*, *Vayu* and *Akasha mahabhoota* like the *ashir snanam* (bathing other than the head) and the use of the drugs having the dominance of the *katu* (pungent) and *tikta* (bitter) tastes.

The *sparshendriya* is used in broad aspect. Not only the skin which is seen through the eye, the *sparshendriya* can be understood as the Receptors. The various types of receptors are-

- ❖ Mechanoreceptors work mechanically like Vibration i.e. in ear - tympanic membrane vibration.
- ❖ Chemoreceptors work in response to the chemical reactions like the mucosal membrane of the nose that responds to the irritant, and the response to the hot and cold in the mouth. Smell perception of an irritant does not take place when it comes in contact with the mucosal membrane of nose. It directly causes the sneeze. Similarly in the mouth also the perception of the taste does not take place when hot /cold things are ingested.
- ❖ Photoreceptors in eye i.e. Rods and Cones. Any kind of foreign body in the eye leads to the lacrimation.

Here it should be noted that Vibration, Irritation, Hot, Cold are the subject of *sparshendriya*. Hence these receptors can be correlated to *sparshendriya* which has relation with *Vayu Mahabhoota*<sup>[16]</sup>.

Even all impulse to the brain and motor from the brain is due to movement due to the *Vayu*. So, *Vayu* plays a major role along with all sense organs to perceive the objects.

Acharya sushrut has mentioned dominance of each *mahabhoota* in different layers of the eye but due to preponderance of *Agni mahabhoota* in *Chakshurendriya*, it is mainly the causative factor for the diseases of eye.

#### 4. Study of some diseases of *Shalakya* in terms of *Panchmahabhoota*-

The disease *Shuska akshi paka*,<sup>[17]</sup> is the best example of *Agni vriddhi* along with *Vayu vriddhi* in the *chakshu*. Opposite of that the concept of *Agni kshaya* can be seen in the disease of eye namely the *Adhimantha*,<sup>[18]</sup> correlated with the Glaucoma in modern science wherein the intra-ocular pressure increases with the impairment of vision. The reason for the *Agni* diminution is other three *Mahabhootas* i.e. *Jala* (fluid), *Prithvi* (gross) and the *Vayu* (cold). Here one thing should be noticed that either in *Agni vriddhi* or *kshaya*, the *Vayu* plays a major role. *Anal (agni)* and *Anil (vayu)* are friends as the increased or decreased *vayu* leads to impairment of *agni*. Balance of *Agni* can be maintained by maintaining *Vayu*. Treatment of *Agni vriddhi* in *chakshu* should be done with *Netra Tarpana* (nourishment to the eyes), *Dugdha/Jala Parishek* (pouring of the milk and water), *Aschyotan* (eye drops) while the *Agni kshaya* can be treated by the application of the *Tikshnanjana* (pungent collyrium).

The presence of *Panchmahabhoota* in different layers of the eye leads the understanding of the *vriddhi* and *kshaya* of other two *mahabhootas* namely the *Akasha* and *Prithvi*. *Akasha vriddhi* can be understood as short sightedness or myopia while the *Akasha kshaya* as hypermetropia or long sightedness. The *vriddhi* of *Prithvi mahabhoota* can be taken as *Cataract/pterygium*. The treatment of above mentioned

diseases will be opposite to attribute of that particular *Mahabhoota* as *Tarpana* in myopia.

In chronological order of evolution of *Panchmahabhoota*, the *Jala* evolves after the *agni*<sup>[23]</sup>. This is significant as it deals with the *Rasanendriya* and its *Adhithana*, *Jihva* or the tongue. Almost all kind of diseases of tongue can be classified into two i.e. the *Jala Mahabhoota Vriddhi* or the *Jala Mahabhoota Kshaya* as the origin of *rasanendriya* is *Jala Mahabhoota*. Properties of all *mahabhoota* are the main responsible factor for the manifestation of the diseases in the senses.

Either increased or decreased *Jala Mahabhoota* leads to *jihva roga*. Increased *drava guna* (fluidity) of *Jala mahabhoota* leads to excessive salivation in the mouth. Opposite to that if *Vayu (ruksha)*, *Agni (ushna)*, *prithvi (khara)* is increased, the *Jala* is depleted in its *drava guna* leading to the dryness of the mouth and due to dryness, the taste cannot be perceived. The pores of the tongue where salivation occurs are obstructed either by *Agni*, *Vayu* or *Prithvi*. Hence salivation decreases. As per *Ayurveda* as well as the modern science, the taste of particular item is felt because it dissolves into the saliva.

Last *mahabhoota* to evolve in the chronological order is *Prithvi* which deals with *Ghranendriya* and its abode namely the nose. Physiology deals with normal functions of basic elements of the body and anatomy with the normal structure of basic elements of the body. Abnormality either in functions or in structure shows pathology. The *Prithvi mahabhoota* can be understood in this context. The external as well as internal anatomy of the nose is formed mainly by cartilages which are dominant in *Prithvi Mahabhoota*. The increase or decrease in the *Prithvi Mahabhoota* is the main causative factor for the pathological manifestations in the nasal diseases.

The intake of the excessive dry, cold and rough substances, the cause of increase in the *prithvi* manifests as dryness of the mucosal membrane of the nose. If hot substances have been taken in lesser quantity for a long time it does the same. For example if a paste is put in the open air it dries by virtue of dryness and coldness. While the same paste when put on the low flame continuously it leads to the rough transformation. Here, due to the dryness of the mucosal membrane, the secretion of mucosa (chemical gated channel of olfaction) decreases. So, smell cannot be perceived. In both these conditions, the hardness of *Prithvi* is increased. Hence, the treatment to decrease this hardness will be the softness present in the *Akasha* and the unctuousness of the *Jala*. Along with this, a slight presence of the hotness of the *agni* is desired as this the only cause of transformation. On the contrary, if the hardness is decreased, the softness is relatively increased. This increase implies the excessive secretion from the mucosa which further leads to impairment of olfaction. The line of treatment in such a situation is the hotness of *Agni*, concentration of *Prithvi* and dryness of *Vayu*. Hence, the drugs dominant in the pungent and astringent tastes along with those having the hot potency need to be prescribed.

#### 5. Discussion and Conclusion

The Indian knowledge of the evolution described in the various schools of philosophy plays an important role in formulation of the basic principles of the indigenous system of medicine namely the *Ayurveda*. The development of *Ayurveda* has taken place with the ideas of the Indian Philosophies and their needful modifications like the

universal principle of the cause and effect<sup>[19]</sup>. The concept of the *Panchmahabhoota* is again a very fundamental and all pervading principle of *Ayurveda*. The different attributes of the *Mahabhoota* and their normal functions are the main causative factor for the normal condition of the body. Vitiating of these properties or functions leads to impairment of the concerned entities like the senses according to the dominance of a particular *Mahabhoota*. The theory of the *Panchmahabhoota* is well valid for the special knowledge stream of the *Shalaky Tantra* of *Ayurveda*. Each of the five *mahabhoota* plays a unique role in the physiology, pathology and treatment. The *Ayurveda* principle of the similitude and dissimilitude namely the *Samanya and Vishesha* respectively utilizes the *Panchmahabhoota* as an agent for the health and disease. The *Vayu* represents the energy and activity, *Akasha* represents the space, *Agni* plays an important role in the treatment as it is the sole cause of transformation. In evolution theory *Agni* placed in the middle of the *Panchmahabhoota*, It shows that the function the *Agni* is basically Transformation. *Agni* dissolves *Prithvi* and *Jala* into *Vayu* and *Akasha*. *Akasha* and *Vayu* culminate into *Jala* and *Prithvi* with help of *Agni*. Hence in treatment whenever *Jala* and *Prithvi* increase, the drugs which are dominant in *Vayu* and *Akasha* along with *Agni* is desirable, while in diseases which is due to increased *Vayu* and *Akasha*, should be treated by drugs which have dominance of *Jala* and *Prithvi* along with *Agni Mahabhoota*. If *Agni* is increased *Jala* and *Prithvi* dominant drugs can be more useful and in decreased condition of the *Agni* should be treated with *Agni, Vayu* and *Akasha*. Thus, a pragmatic approach towards the *Panchmahabhoota* which are the secret of the life shall ensure the health of the human being and can be the possible solution to the ailments of humanity. It is hence proved that the basics of *Ayurveda* are the very cause of its survival from the primary trisutra level to the contemporary progressive science<sup>[20]</sup>.

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