

## CONCEPTUAL STUDY OF *KALA SHAREER* w.s.r. to *SHUKRADHARA KALA* A *SARVASHAREERVYAPEE*

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### ABSTRACT

*Kala* is a unique concept explained by *Acharya Sushrut* in *Sushrut Samhita (Sharirasthan)* in *Garbhavyakaran* chapter There are seven *Kalas* present in the body which are covering between *Dhatu* and *Aashaya*. The specific *Kala* is located at specific site. The seventh *Kala* in the body is *Shukradhara Kala*. This *Shukradhara Kala* is *Sarvasharirvyapee*, which extends throughout the entire body of all living creatures. For this co-relation we need to interpret and conclude the *Shlokas* in a proper way to clear the concept of *Kala* and *Shukradhara Kala* as *Sarvasharirvyapee*.

**Keywords:** *Kala, Shukradhara Kala, Sarvasharirvyapee, Dhatu, Aashaya*

### INTRODUCTION

*Rachana Sharir* is one of the fundamental sciences. Every concept of *Ayurveda* has its own importance. *Kala* is a unique concept explained by *Acharya Sushrut* in *Sushrut Samhita*. *Kala Sharir* is an important part of *Ayurvedic* Anatomy. *Kala* means layers or membranes in the body. As the cross section of the wood will shows the different layers and parts of its internal structures as layer by layer and thin layer separates the different layers of structures. Similarly, the membrane appears by the cross section of the fleshy part of the body or any muscular regions or any internal parts of the organs. It is also a limiting membrane or covering between *Dhatu*s and *Aashaya*s.

In our whole lifespan, formation and development of *Bhavpadarthas* are going on by these *kalas*. The

*Dhatu*s together with the *Malas* are formed by the *Kalas* which are minute and invisible. Their activity results in production of the several tissues (*Dhatu*s). In *uttarottar* (successive) *Dhatu* formation, *Shukra Dhatu* is formed as extract of all *Dhatu*s.

As per *Ksheeradhinyaya* (parinam theory), milk is converted into curd by the help of bacterial enzymes and later curd can be converted into butter and butter into *Navneet*(ghee). It means ghee is present in milk in subtle form. Similarly, part of *Rasa* is converted into the next tissue namely *Rakta* or blood by the enzymes in *Rasa*. During the conversion, waste product is *Kapha*. *Rakta* into *Mansa* and waste product is *Pitta*. This process of conversion of part of tissue into the next and more evolved tissue continuous further till all the tissues upto *Shukra Dhatu*

are formed. According to this theory, *Shukra Dhatu* contains seed of all the seven tissues. Hence, this theory can very well explain how in a fertilized ovum which results from conjugation of sperm and ovum (*shukradhatu* of both parents) all the seven tissues are represented. *Kala* which is “*Dhatvashayanter maryada*” i.e. *Shukradharakala* hence can be said as *sarvashareervyapee*.

### **Aim and Objectives**

To review the *Kalas* and specially *Shukradhara Kala* a *Sarvasharirvyapee Kala*

### **Material and Method**

*Bruhatrayee* along with their commentaries by different Authors were referred for the study. References from modern sciences were also utilized to correlate the concepts. While studying about *Kala* through *Sushrut Sharir Sthan* the commentaries of different authors and some texts were critically studied to interpret and conclude about *Kala*. *Shukradhara Kala* is studied from different *Samhitas* and *Sushrut Samhita Sharirasthan* by different editors were referred to conclude it as *Sarvasharirvyapee Kala*. The matter available on internet and published journals were also studied.

### **Observations and Results**

*Acharya Sushrut* has explained the *kalas* in *Garbhavyakaran shareer* i.e. Embryology. Even though *kalas* are explained in embryonic life, they are found to be functioning throughout life.

References of *kalas* are also found in *Sushrut Samhita Kalpasthan ‘Sarpadashtavish Vigyaniam Kalpa Vyakhya’* chapter, during the treatment (*Chikitsa*) of snake bite. The snake poison is found to successively attack the seven *Kalas* or fascia and gives rise respectively to the seven stages of poisoning<sup>[1]</sup> The interval of time during which a deadly poison leaves a preceding *Kala* and carried forwards by the bodily *vayu*, attacks the succeeding on, is called its *Vegantara*. (The intervening stage). Hence, we can say that *kalas* are present and functioning in the body from the birth to the end of life.

There are total seven *Kalas* in the body. These are the limitation between the *Dhatu* and *Aashay* or limitation of *Dhatu Nirmit Aashay*. The *kalas* are latent and extremely minute particles invisible to naked eyes as are the cells in the human body. This limitation or covering between *Dhatu* and *Aashaya* is *kala*.<sup>[2]</sup> In the absence of advance modern technology, the *Acharyas* have explained about *kalas* by their divine power of observation, knowledge and logic.

The process of formation of *Dhatu* takes place in many stages. In the initial stage, as per *Ksheeradhinyaya* i.e. *kramaparinam* theory mentioned in the *Charak Samhita*, *Navaneet* is present in the milk in subtle form; it is manifest only after *Uttarottar* (successive) processions. Similarly, some part of one *Dhatu* is converted into next *Dhatu* like *Ras* into *Rakta*, *Rakta* into *Mansa*, *Mansa* into *Meda*, *Meda* into *Asthi*, *Asthi* into *Majja* and lastly *Majja* into *Shukra*. In this way *Uttarottar Dhatu* (successive tissue) formation takes place. According to this theory, *Shukra Dhatu* contains seeds of all the seven *Dhatu*s.<sup>[3]</sup> Hence after fertilization, in a fertilized ovum which results from conjugation of *Shukra Dhatu* of both parents (sperm and ovum) all the seven tissues are represented.

In the initial stage, *Dhatu* is in the form of liquid, which is called as *Dhaturasa*. This *Dhaturasa* gets converted into next *Dhatu*. During this process some *Kleda* remains between *Dhatu* and *Aashaya*. This *kleda* i.e. *Dhaturasa shesh* or *Dhaturasa vishesh* is not converted into *Purva* (previous) *Dhatu* or *Uttar* (successive) *Dhatu* which is remained in very less quantity, due to minimum quantity they are called as *kala*.

From all these references, we can consider that *Kalas* are one of the essential parts of the *Dhatu*s, means *Shukradhara Kala* is one of the essential parts of the *Shukra Dhatu*.

The seventh *kala* in the body is called *Shukradhara Kala* (semen bearing), which extends throughout the body of all living creatures.<sup>[4]</sup> The physician should know that like fat (*sarpi*) in the milk, sugar in the

expressed juice of sugar-cane, the (seat of) semen is coextensive with the whole organism of a man (or animal). The semen passes through the ducts situated about two fingers breadth on either side (vas deferens) and just below the neck of the bladder, and finally flows out through the canal.

According to Ayurved, *Shukradhara Kala* is *Sarvasharirvyapee* (spread in whole body). Because, at the time of fertilization zygote form with the union of male and female *beej* (gametes). In zygote each and every part of the body (*Anga-Pratyanga*) and *Bhav* is present in unmanifest form. When each *Bhav* is present in male and female *beej* then they should be manifest in the zygote. It is possible only when both the *beej* contain all necessary factors or parts of the body in the subtle form. So, we can say that *Shukra* and *Shukradhara Kala* is *sarvasharirvyapee*.

For the formation of *Shukra*, various hormones in the body should be in the balanced form with each other. All hormones are situated in the different locations and their secretions act on that particular organ with special functions. Hence formation of *Shukra* and area (*vyapti*) of *Shukra* is whole body.

Modern view of *kala* (membrane)-

Membrane are formed during the embryonic period itself, mainly from three kinds of primary tissues – epithelial, connective and adipose<sup>[5][6]</sup>.

In modern science structurally *Shukradhara Kala* can be correlated with seminiferous epithelium lined in seminiferous tubules

The functions of the *kalas* are as follows: Formation, Protection, Absorption, Transformation, Secretion and Selection. These functions are similar to the function of the cell, so we can consider *kalas* as formative elements similar to cell.<sup>[7]</sup>

The correlation of the seven *kalas* with modern anatomy:<sup>[8]</sup>

1. *Mansadhara kala* – Sheaths or separating membranes of individual muscles.
2. *Raktadhara kala* - Hemopoietic membranes of liver and spleen (Reticulo-endothelial cells)

3. *Medodhara kala* - Membrane secreting bone marrow
4. *Sleshmadhara kala* - Membrane secreting synovial fluid.
5. *Purishdhara kala* - Mucus membrane of the intestines attending to absorption.
6. *Pittadhara kala* - Mucus membrane of the stomach, duodenum and small intestine attending to digestion of food.
7. *Shukradhara kala* - Membrane inside the testes and seminal ducts, producing and transporting semen.

The activity or function of *kala* results into the formation of *Dhatu*.<sup>[9]</sup> They are minute elements and by their activity they transform *Dhatu Rasa* to respective *Dhatu*.

## DISCUSSION

*Kala* is a unique concept explained by *Acharya Sushrut* in *Sushrut samhita*, *Sharirasthan* in *Garbhavyakaran* chapter. We find references in *Ashtang Hridayam*, *Sharirasthan* in *Angavibhaga Shariram* chapter as well as in *Ashtang Sangrah* and *Sharangadhar Samhita*. All Acharya have explained seven *Kalas* which is similar to *Sushrut samhita*, but in *Sharangadhar Samhita*, location of fourth *Kala* is stated to be at *Yakrut and Pleeha*.<sup>[10]</sup>

During embryonic life when *Dhatu* formation is in process, from *beej* (*Shukra* and *Shonit*), during that time *Kleda* (*Dhaturasa Shesh*) remains between *Dhatu* and *Ashaya* which is in very less quantity and it is termed as *Kala* or in other words *Kala* is formed from this *Kleda*.

The body which are connected with the process of formation of the *Dhatu* and *Malas*. One of the meanings of *Kala* is quality and biologically active quality of one *Dhatu* giving birth to another type is termed as *Kala* by *Acharyas*. These are membranes with special function. In *Dhatu* formation *Uttarottar Dhatu* are formed. In this process *Shukra Dhatu* is formed at last. It means all *Dhatu* extract is trans-

formed into *Shukra*. *Shukradhara Kala* (semen bearing) means to hold *Shukra* is extends throughout the body of all living creatures.

At the time of fertilization zygote forms with the union of male and female *beej* (gametes). In zygote, each and every part of the body (*Anga-Pratyanga*) is present in unmanifested form. If each factor is present in male and female *beej* then they should be manifest in the zygote. It is possible only when both the *beej* contain all necessary factors or parts of the body in the subtle form. So, we can say that *Shukra* and *Shukradhara Kala* is *Sarvasharirvyapee*.

## CONCLUSION

*Kala* described in *Ayurved Samhitas* are special membranes in the body present between *Dhatu* and *Ashaya* which performs the vital functions in the body. These *kalas* are seven *Mansadhara*, *Raktadhara*, *Medodhara*, *Sleshmadhara*, *Purishdhara*, *Pittadhara* and *Shukradhara Kala*.

According to *Samhitas*, *Shukradhara Kala* is *Sarvasharirvyapee* (spread in whole body). When each factor is present in male and female *beej*, then they can manifest in zygote. It is possible only when both *beej* contains all necessary factors or parts of the body in the subtle form.

As per *Ksheerdadhi nyaya* i.e. *kramaparinam* theory mentioned in the *Charak Samhita*, *Navneet* is present in the milk in subtle form, It is manifest only after *Uttarottar* (successive) processions.. According to this theory *Shukra Dhatu* contains seeds of all the seven *Dhatus*. Hence after fertilization, in a fertilized ovum which results from conjugation of *Shukra Dhatu* of both parents (sperm and ovum) all the seven tissues are represented. Hence we can say that *Shukradhara Kala* is *Sarvasharirvyapee Kala*.

## REFERENCES

1. Kaviraj Kunjalal Bhishgratna Sushrut Samhita, Kalpasthan Vol.III, Chowkhamba Sanskrit Series of-fice, Varanasi Edition 4<sup>th</sup> 2009 Editor – Dr. Laxmidhar Dwivedi, Su. Kal.4/48-49 Page-50,

2. Dr. Kevalkrishna Thakral, Sushrut Samhita, Sharir Sthan Vol.II, Chowkhamba Orientaliya,Varanasi. Reprinted- 2017, Page -53
3. Acharya priyavat Sharma Charak Samhita of Agnivesh Vol. II, Commentator – Acharya Vidyadhar Shukla, Acharya Ravidatta Tripathi, Chowkhamba Sanskrit Pratishthan, Delhi. Reprinted- 2017, Cha. Chi. 15/16 Page- 361
4. Kaviraj Kunjalal Bhishgratna, Sushrut Samhita, Sharir Sthan Vol.II, Chowkhamba Sanskrit Series of-fice, Varanasi, Reprinted- 2007 Edition 3<sup>rd</sup> Dr. Laxmidhar Dwivedi Su. Sha. 4/20-21-22-23 Page- 171
5. Kumar Ashwini W., Critical and Comparative Study on Kala Shareer W.S. R. to Mansadhara Kala RGUHS-2004
6. Dhindhime R. Tawalare K. Tawalare Kalpana, Kala Sharir – Testimony insight from Ayurved, World Journal of Pharmaceutical and life sciences, -. Vol. 2 Issue – 5
7. Dr. Sumati Khot ,Basic concept of Kala (membrane), Review article published in IJAAM Vol. 3 issue (2015) Page-13
8. Prof. K. R. Srikantha Murthy, Vagbhata's Astang Hridayam Vol. I, Sutra and Sharir Sthan, Chowkhamba Krishnadas Academy Varanasi. Page - 395
9. Yadav Sharma Sushrut Samhita, Sharir Sthan Vol.I Chowkhamba Surabhi Prakashan, Varanasi 2012 Su. Sha. Page-355
10. Parshuram shashtri Vidyasagar, Editor Shararngdhar Samhita, Choukhambha Orientalia, Varanasi 2000 , 4<sup>th</sup> edition, Page-43,

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