

**CLASSICAL REVIEW OF KALA SHARIR'S CONCEPT W.S.R TO
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Article Received on
12 Oct. 2023,

Revised on 1 Nov. 2023,
Accepted on 22 Nov. 2023

DOI: 10. 20959/wjpr202321-30338



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ABSTRACT

A unique concept called Kala is described in Sushrut Samhita. There are seven Kalas throughout the body, each of which fills a specific place. Shukradhara Kala is body's seventh kala. The seventh kala of the body, which extends into the complete body, serves as the interpretation and conclusion of the Shukradhara Kala Sarvasharirvyapee. Kala refers to the body's layers or membranes. The body is made up of several membranes and layers that surround and protect the organs. The organs are supported and shielded by them.

KEYWORDS: Kala, shukradhara kala, sarvasharirvyapee, dhatu, aashaya.

INTRODUCTION

Kala Sharir is one of the fundamentals in Rachana Sharir. Every Ayurvedic notion has a specific significance.

In Sushrut Samhita, Acharya Sushrut reveals the original concept of Kala. Kala Sharir is a vital part of Ayurvedic anatomy. Kala is membranes or layers of the body. The same way each layer of the wood shows the various levels and elements of its internal design as it separates the numerous structural layers.^[1] Any fleshy, muscular, or internal organ parts of the body can be cross-sectioned to reveal this membrane. Additionally, it serves as a shield or boundary layer between Ashayas.

The Susrutha Samhita, which explains both macroscopic and gross anatomy, is the earliest known source of anatomical knowledge. If we look at Kala's role in the body, it is obvious that it holds the vital, essential constitutions. Kala will form inside the uterus. On the surface, Kala's function is clear. Kala is still active when we consider the cellular level, nevertheless. A cell is made up only of Kala. Kala (Membrane) is another part of cellular organelles. Changes in cell activity, excretion, and other physiological events are solely the responsibility of Kala. This is why Kala's previously described derivation is appropriate.

AIM

The purpose of the study was to investigate and evaluate Kala Sharir's structural entity and practicality in order to further our understanding with modern aspect.

OBJECTIVE

1. To learn about the Shukradhara Kala.
2. To examine the shukradhara Kala from a contemporary perspective.
3. To examine the relevance of kala in the context of modern analogy.

MATERIALS AND METHODS

Writings regarding Kala Sharir may be found in classical texts including the Susrutha Samhita, Ashtanga Sangraha, Ashtanga Hridaya, Bhavprakasha, and Sharangdhar Samhita. evaluating pertinent publications, articles, internet information, and previous research papers, with a focus on the histology in the current anatomical literature.

DISCUSSION

Following an examination of the literature from both classical and modern philosophy, we may present a hawk-eye view about Kala Sharir and specifically Shukradhara Kala and its purpose in the following concise manner.

The Mamsadhara Kala

Among the seven kalas, the first one is referred to as mamsdhara kala. The mamsdhara kala encompasses the various branches and sub-branches of veins, nerves, arteries, and tissues.^[1] These muscle tissues also consist of a protein sheath that binds the muscle fibers and cells together, aided by small membranes and embedded blood arteries that run between the muscle fibers, which should be compared in relation to mamsdhara kala.^[2]

Raktadhara Kala

The second kala is known as raktdhara kala. It is located within the mamsa and primarily facilitates the circulation of blood, with blood-forming organs such as the liver, spleen, and srotas containing blood vessels. Once formed, the blood circulates within the mamsa.^[3] Similar to how a latex-producing plant releases milky sap when its branch is cut or bruised, when a muscle is injured, blood flows out rapidly and abundantly.^[4]

Medodhara Kala

The third kala is called medodhara kala. It is present in all the small bones and in the abdominal region. Majja, a substance found in larger bones, contains vasa, which is the pure form of fat found in muscles.^[5] Loose connective tissues in most areas of the body contain adipocytes, while adipose tissue is specifically found in certain regions, such as the mesenteric omenta and subcutaneous tissues.^[6]

Sleshmadhara Kala

The fourth kala is called Sleshmadhara Kala. The presence of synovial fluid in every joint of the body is of utmost importance. When joints are lubricated with this fluid, they are able to move easily, much like how a wheel spins effortlessly when lubricated with oil.^[7] A joint that is lubricated with sleshma (synovial fluid) can move without any restrictions.^[8]

Purishdhara Kala

The fifth kala, known as purishdhara kala, is located in the Pakvasaya within the Antahkastha. It originates from the Yakrit and intestine, while the Maldharakala separates as an unduke side.^[9]

Pittadhara Kala

The sixth kala is pittadhara kala. It is responsible for transporting the four types of ahara (eatables), namely Ashita, Khadita, Peeta, and leedha, from the amasaya to the pakvasaya.^[10] In modern terms, it can be compared to the duodenum. All the food that enters the human kostha is carried by jirna and undergoes shoshan in a proper manner through the heating agent of pitta.^[11]

Shukradhara Kala

Shukradhara kala is considered the seventh kala, which is believed to originate and exist throughout the entire human body. Shukra, the essence of reproductive fluid, is collected and

stored by shukradhara kala. However, modern science does not acknowledge its visible presence.^[12]

In a manner akin to the inherent presence of ghee in milk and the latent existence of jaggery in sugarcane juice, shukra is likewise present in a latent state within the human body. Analogous to the separation of ghee from milk through centrifugation, the human body expels shukra dhatu during the act of sexual intercourse.^[13]

In a similar manner, it can be observed that all the dhatus in females are formed systematically. The Rasa dhatu is created by aana rasa, which subsequently leads to the formation of rakta dhatu. The aansh of the Rasa dhatu is transformed into the rakta dhatu and this pattern is observed in every dhatu where the aansh of each dhatu is found in its uttar dhatu. Finally, the majja dhatu leads to formation of shukra dhatu. It can be concluded that due to the formation and presence of dhatus in Sarvasharir, the Shukra dhatu is present in the Sarvasharira.

Modern Aspect

Modern view of kala (membrane)

Epithelial, connective, and adipose tissue are the main three types of primary tissues from which membranes are primarily generated throughout the embryonic stage.

Scientifically speaking, Shukradhara Kala has a relationship to the seminiferous epithelium lining seminiferous tubules. The kalas' primary purposes are formation, protection, absorption, transformation, secretion, and selection. We can think of kalas as formative elements similar to cells because these functions are akin to what a cell does.

The analogue of the seven kalas with modern anatomy

- 1) Mansadhara kala - The dividing membranes or sheaths of separate muscles.
- 2) Raktadhara kala - Liver and spleen hemopoietic membranes (reticulo-endothelial cells).
- 3) Medodhara kala - Bone marrow that secretes a membrane.
- 4) Sleshmadhara kala - Synovial fluid is secreted by a membrane.
- 5) Purishdhara kala - Intestinal mucus membrane involved in absorption.
- 6) Pittadhara kala - The small intestine, duodenum, and stomach all have mucus membranes that aid in food digestion.

- 7) Shukradhara kala - A membrane that produces and transports semen inside of the testes and seminal ducts.

CONCLUSION

Kala can be understood as a membrane structure found in the spaces between tissues. In the testis, epididymis, seminal vesicles, ductus deferens, and other reproductive organs, in particular, Shukradhara Kalaa can be thought of as a membrane lining boundary. In Ayurved Samhitas, kala is expressed as a special membranes in body. Kala situated between the dhatu and ashaya, performing vital functions of body. The male and female beej represent each factor of the father and mother respectively. Beej consist of all necessary factors of the body in an unnoticeable form. According to sheerdadhi nyaya, mentioned in Charak Samhita, navneet is present in milk in an unnoticeable form. According to this, Shukra Dhatu contains some parts of all seven dhatus. So, after fertilization, the ovum which is fertilized from the shukra dhatu of both the parents (sperm and ovum) all the seven tissues are represented. Hence, we can conclude that the Shukradhara Kala is Sarvasharirvyapee Kala.

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