wjpmr, 2024, 10(4), 41-43

SJIF Impact Factor: 5.922

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Review Article

ISSN 2455-3301

WJPMR

A REVIEW ON KALA SHARIR W.S.R. TO PURISHA DHARA KALA

***[1]Dr. Puja Gawande and [2]Dr. Suryakant Dwivedi**

[1]Associate Professor, Sharira Rachana Department Smt. Sumitrabai Thakre Ayurved College Yavatmal.
[2]Associate Professor, Shalya Tantra Department Shri K.R. Pandav Ayurved College Nagpur.

***Corresponding Author: Dr. Puja Gawande**

Associate Professor, Sharira Rachana Department smt Sumitrabai Thakre Ayurved College Yavatmal.

Article Received on 04/02/2024 **Article Revised on 24/02/2024** **Article Accepted on 14/03/2024**

INTRODUCTION

Kala Sharira is an important part of Ayurvedic anatomy. Anatomy is science that deal with the different structures of human body like bones, joints, Twacha, different sense organs and kala etc. Relevant knowledge of anatomy is very important for better understanding of diseases and their cure in form of medicinal or surgical process. Kala was first time described by Acharya Sushruta while explaining the detailed development of body parts in Garbhavyakaran Sharir chapter of Sharirsthan Sushruta samhita. There are total Seven kala in body. Kala is limiting membrane or layers in our body situated between Dhatu and Aashaya. These are extremely minute particles and in visible to naked eye, similar to cell. They can be understood by their functions in the body. The word kala stand for, the property or a quality so these are special membranes in the body which are having important role in performing body physiology. There are many layers or membranes in the body which form an envelope over 1the organs. The cell membranes separating each cell from each other can be considered as Kala.

Aim: To study the kala sharir & Raktadhara kala.

Objective

Study the kala sharir from various samhita.
Study the Raktadhara kala

MATERIAL AND METHOD'S

1) Classical texts of Ayurveda samhitas Charaka Samhita, Sushruta Samhita, Ashtanga Sangrah and Ashtanga Hridaya were consulted as research references, to Know the line of treatment in ancient system Ayurveda.
2) Evidence based resources as journals, books and data based information from various search engines were referred for recent information.

OBSERVATION

Description of Kala in various samhita

According to archya sushruta Kala is defined as a separator between dhatu and its ashaya. The word Kala stands for property or a quality so these are some special membranes in the body which are having important role in performing body physiology. By definition is clear that the kalas are the layers or membranes present at the junction of the dhatu and their ashayas. They are principally of 7 types.

1) Mansadhara Kala – It is the first type of kala. Which is found inside the muscles and which allows the siras (veins), snayu (ligaments), and dhamani (arteries) to spread their branches inside the muscles.
2) Raktadhara Kala – It is second type of kala. Which is present inside the mansa (muscles) within which shonita (blood) is present especially in siras (veins) localized in yakrit (liver) and pleeha (spleen).
3) Medodhara Kala – It is the third kala, and med is present in the abdomen and small bones of all living beings.
4) Shleshmadhara kala – It is the fourth type of kala. This kala present in synovial membrane.This is present in all sandhi (joints).
5) Purishdhara kala – It is the fifth kala. It is found in pakvashaya(large intestine and rectum)with in abdominal cavity. This kala extends from yakrit (hepatic flexure) to whole large intestine or the remaining segments of large intestine which surround other visceras of abdomen. This kala separating the kitta and sara bhag right from unduk.
6) Pittadhara kala – It is sixth type of kala. Which supports the four kinds of food and drinks pushed out from the amashaya (stomach) and staying in the pakvashaya (small and large intestine).
7) Shukradhara kala – It is last and seventh kala. Which pervades the entire body in all living beings.

Kala in Ashtanghridaya and Ashtangsangaraha

Kala is kleda between dhatu and ashaya. He has given more clarification about its genesis that ushma of rasadhatu matures the kleda located between rasadhatu and its ashaya to form the first kala. Like this it continues till ushma in shukradhatu forms seventh kala. . Vagbhat also mention kalas in ashtanghridaya as like sushruta instead of raktadhara kala – asrigdhara kala,

sleshmadhara kala – kaphadhara kala.

Kala in Sharangdhar Samhita

Sharangdharas explanation of kala also gives the same meaning and anatomical definition of kala. According to him 'The kleda or moisture or liquid portion present in between dhatu and ashaya is processed by the heat of the body and converts into kala.Sharangdhara explained also seven kala – Mansadhara ashrukdhara, medodhara, yakritpleehadhara, antradhara, agnidhara, retodhara kala.

Modern view of Kala (Membrane)

Membrane are formed, during the embryonic period itself, mainly from three kinds of primary tissues – epithelial, connective and adipose.

1. Epithelial tissue – makes for two kinds of secreting membrane viz, mucous and serous; the Former secretes thick jelly like fluid i.e. mucus and are inside all hallow organs of digestive, respiratory, circulatory, urinary and reproductive system, Serous membranes secretes thin watery fluid and are present enveloping certain organs (heart, lungs, testes etc.)
2. Connective tissue – Membranes formed from this are of different shapes – long, cylindrical, flat etc and go into the formation of fascia, aponeurosis, septa, ligaments, tendons, cartilages etc; some of these are inelastic, some moderately elastic and some greatly elastic. These are found in the skin, walls of organs of digestive, circulatory, urinary, and muscular and haemopoietic systems.

DISCUSSION AND CONCLUSION

Kala is important concept described in Ayurved which has to be given more emphasis. Kala are some special membrane in the body which performs some functions and assist to maintain body physiology. The three types of Kala described in Ayurved i.e. Snayu Pratichanna, Jarayu Santat and Shleshma Vestita can be correlated with fibrous, serous and mucous membranes in the body. The second kala is Raktadhara kala (supporting membrane of blood) it is present in Mamsa (Muscle tissues) especially in Sira, Pleeha (Spleen) and Yakrut (Liver). When muscles are cut Rakta flows from the wound just as a milky sap when trees are cut. Acharya sharangadhara mentioned dvitiya Rakta dhara kala but he differs in his opinion he claims that Yakrut (Liver) Pleeha (Spleen) is the 4th kala where Sleshma dhara kala is present. Initially Raktadhara kala is considered as a semi permeable barrier separating lumen from vessel wall, the endothelium is now recognised as a complex endocrine organ responsible for a variety of physiological processes vital for vascular homeostasis. The endothelium has an important role in maintaining vascular homeostasis. Although once considered simply as a semi permeable membrane, endothelial cells transducer a wide range of physiological stimuli, and in response, produce a variety of signalling molecules that exert autocrine and paracrine effects. The endothelium can therefore be considered as an important endocrine organ and is responsible for maintaining vasomotor tone, haemostasis and thrombosis, inflammatory processes, platelet and leucocytes vessel-wall interactions and controlling vascular permeability. The endothelium modulates arterial stiffness which precedes overt atherosclerosis and is an independent predictor of cardiovascular events.

Unsurprisingly, dysfunction of the endothelium may be considered as an early and potentially reversible step in the process of atherogenesis and numerous methods have been developed to assess endothelial status and large artery stiffness. Atherosclerosis a slow disease in which arteries becomes clogged and hardened. It is the underlying cause of most cases of heart attack, stroke and vascular dementia and is found in 80 to 90% of Americans over the age of 30. Fat, cholesterol, calcium and other substances form plaque which builds up in arteries. Hard plaque narrows the passage that blood flows through. That causes arteries to become stiff and inflexible (atherosclerosis is also known as hardening of the arteries). It contributes to the development of cardiovascular disease which is the leading cause of death in people over 45. Soft plaque is more likely to break free from the artery wall and cause a blood clot which can block blood flow to vital organs. Many researchers believe it begins with injury to the innermost layer of the artery, known as the endothelium. The Raktadhara Kala mentioned in Ayurved has great similarity with that of endothelial lining of blood vessels. Any dysfunction will leads to formation of diseases. In contemporary science atherosclerosis is associated with.

3. Adipose tissue (fat) is a storage tissue. It forms membranes or layers – thin or thick in various places. It is present in the subcutaneous tissue, bone marrow, abdominal wall, omentum, forms padding around some organs like kidneys, eyeball etc. With the help of above facts, three kinds of kala. endothelium and other layers of vessels. So kipping in mind the concepts of Kala told by Ayurved the treatment approach to this life threatening disease can be obtained. It could be possible that by means of herbal remedies acting on Raktavaha Srotas or Rakta dhatu would contribute to reverse the pathology occurred in blood vessels, by normalizing the functions of Raktadhara Kala.In this view a clinical study id planned to assess the role of Raktaprasadana Dravya in the cases of Atherosclerosis. The study includes the anti-lipolytic and anti-inflammatory effects of these drugs in albino rats. The study is ongoing the results are not observed.

Since this is the novel aspect of treatment in Ayurved. Many people have developed Gunachikitsa, Panchabhautika Chikitsa, Tridosha Chikitsa, Nadichikitsa etc. Similarly this can be a new instinct to develop Kalachikitsa as a specialty of Rachana Sharir.

BIBIOLOGY

1. Sushrut Samhita. Commentator Dr. Ambicadutt Shastri. Sharir sthana 4/10, Varanasi: Chaukhamba Sanskrit Sansthan., 2005.
2. Sushruta. Sushrut Samhita. Sharma PV, editor. 8th ed. Varanasi: Chaukhamba Oriantaliya; Sutrasthana, 2005; 21/10: 102.
3. Ghanekar Bhaskar Govind, Sushrut-samhitasharirsthan; chapter no-4, verse 10/Reprint/ Meherchand Prakashan, Delhi, 2006; 108-109.
4. Kumar Ashwini.W. Critical and Comparative Study on Kala Shareera W.S.R to Mamsa Dhara Kalaa. RGUHS, 2004.
5. Dhimdhime Ravindra, TawalareKiran, Tawlare Kalpana Kala Sharir- Testimony insight from Ayurveda; world journal of Pharmaceutical and life science, vol-2,issue-5, 348-35 Guyton & Hall, text book of medical physiology, 11th edition.
6. Mishra A P - A Critical Study of Kala. (Lucknow Univerity, 2004.
7. KhotSumati, Basic concept of Kala, IJAAM, 2015; 3(1): 11-14.
8. Puri Nidhi & Gupta Prem Kumar, Sharma Jaishree & Puri Deepak, Prevalence of atherosclerosis in coronary arteryand internal thoracic artery and its correlation, North-West Indians. Indian J Thorac Cardiovasc Surg, 2010; 243-246.
9.