

**DETAIL STUDY OF KALA SHAREERA W.S.R. TO PITTADHARA
KALA WITH ITS MODERN CLINICAL ANATOMY****¹Dr. Vaibhav Mishra and ²Dr. Sourabhee Koregave**

¹Department OF PG Studies IN Shareera Rachana Dept. of P.G Studies In Shareera Rachana
Adamc. College of Ayurveda, Bedkihal-591214.

²M. D (AYU), Professor & H. O. D Dept. of P.G Studies in Shareera Rachana Adamc.
College of Ayurveda, Bedkihal-591214.

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Corresponding Author*Dr. Vaibhav Mishra**

Department of PG Studies
IN Shareera Rachana Dept.
of P.G Studies In Shareera
Rachana Adamc. College of
Ayurveda, Bedkihal-
591214.

ABSTRACT

Pittadhara kala is on sixth number which is said to be lies in between Amashaya and Pakwashaya i.e. Grahani, which is correlated as small intestine. Grahani act as a store for chaturviddha anna pushed from the amashaya and on its way to the pakvashaya, it also endorses whole digestion and absorption with the help of Pachaka pitta which secreted by pitta dhara kala. Grahani is a sthan of pachakagni which insists in digestion of food. Digestion of food Ahar is converted into Aharras which is then absorbed by the pittadhara kala for the further nourishment of the seven dhatus. Sushruta has described definition of kala and the nature of kala in fourth chapter of sharir sthanam. There are seven kalas in human body whereas pittadhara kala is sex and is present in between pakwashaya and amashaya i.e. grahani. Grahani has

utmost importance in Agni, agni has role in causation every disease. Grahani also promotes complete digestion, assimilation and absorption with the help of Pachak pitta which is produced by pittadharakala. Grahani can also be corelated with the small intestine and Small intestine is present in between stomach and large intestine, which is the major site of digestion and absorption of all nutritive substances, vitamins, micronutrients into the peripheral blood circulation. According to modern view, if we see the nature of mahasrotas i.e. gastrointestinal tract, it is found to be made up of four layers 1) Mucous layer 2) Submucous layer 3) Muscular layer 4) Serous or fibrous layer. The nature of mahasrotes i.e. G.I. tract according to modern view and the nature of pittadhara kala described by Sushruta both are similar, hence to study pittadhara kala can be attributed with the clinical knowledge

for gastro-intestinal tract. Grahani described by Charaka can be considered to be the same organ which is described as pittadhara kala by Sushrutacharya, so considering these points it is needed to study its correlation for further knowledge and research.

KEYWORDS: Kala, Pittadhara Kala, G.I. Track, Grahani.

AIMS AND OBJECTIVES

1. To study the concept of Kala Shareer and Pittadhara Kala.
2. To study the clinical aspects of anatomical structures involved in Kala Shareer and Pittadhara Kala.
3. To study the surgical anatomy and its applied aspect of mucus membrane of the stomach, duodenum and small intestine.
4. To study the surgical importance and kala sharir with reference to Membrane.

INTRODUCTION

Kala is a unique concept explained by Sushrut in Sushrut Samhita. Kala is an important part of Ayurvedic Anatomy, and it is considered as layers or membranes in the body. Ayurveda is the science which is based on various concepts, one of them is kala which is considered as an anatomical part only and remained neglected, whereas kala is having physiological and clinical relevance. Kala is 'dhatwasthananter maryada' rates dhatu and ashaya. Kala is a unique concept explained by Acharya Sushrut in Sushrut Samhita (Sharirsthan) in Garbhavyakaran Chapter. The kalas are seven in number and are situated at the extreme border of the Dhatu and Ashaya. These kalas are extensively constituted with "snayus" impregnated in 'Jarayu' and encased in shleshma.

Pittadhara kala is on sixth number which is said to lie in between Amashaya and Pakwashaya i.e. Grahani, which is correlated as small intestine.³ Grahani acts as a store for chaturvidha anna pushed from the amashaya and on its way to the pakwashaya, it also endorses whole digestion and absorption with the help of Pachaka pitta which is secreted by pitta dhara kala. Grahani is a sthan of pachakagni which insists in digestion of food. Digestion of food Ahar is converted into Aharras which is then absorbed by the pittadhara kala for the further nourishment of the seven dhatus.

MATERIALS AND METHOD

A) Materials

1. Bruhatrayee (Charak Samhita, Sushrutsamhita, Astanghrudya, Ashtang sangra) along with their commentaries by different Authors will be referred for the study.
2. Modern Textbook of Anatomy eg. Anatomy Book of BD Chaorasia, A Concise Textbook of Surgery by Dr.K.Das, Grant's Atlas of Anatomy, Dr.Williams, Dr.Warwick Churchill, Cunningham's Manual of Practical Anatomy & Dissection.
3. Published article in international or national journals, Internet, PubMed etc.
4. Cadaveric dissection will be carried out in the department of Rachana Shareera to study the structure of Kala sharer.

B) Methodology

1. Literary data regarding Kala sharir will be collected from Brihatrayis, Laghutrayis and other classical texts including journals, presented papers, and text books of contemporary science.
2. While studying about Kala through Sushrut Sharir Sthan the commentaries of different authors and some texts will be critically studied to interpret the concept about Kala.
3. Cadaveric dissection will be carried out in the department of *Rachana Shareera* of the college.

C) Method of Data collection

1. Literary works, thesis, published journals of Ayurveda and modern sciences, including articles published on the concept related to subject will be reviewed and relevant information will be collected.
2. References from modern sciences (Textbooks of Anatomy) will also utilized to correlate the concepts.
3. Properly prepared and preserved Cadavers will be dissected to study the anatomical relations between the Kala and Pittadhara kala and photos and images with good quality will be collected for the data interpretation.

D) Inclusion Criteria

1. Structurally well prepared and preserved cadaver.
2. Cadaver of Age group from 20-50 yrs irrespective of sex will be taken for study.

E) Exclusion Criteria

1) Pathological conditions like poisoning, accident, injuries cadaver if any.

OBSERVATION AND RESULT

Sr.No		Charaka	Sushruta	Vagbhata	Ma.Ni.	Bha.Pra.	Sharang.
1	Referance	Su. 13/68,69,70 Chi.14/244 Siddhi 3/24	Su. 21/10 Utt. 40/169	San.Sha. 5/40 Hru.Sha. 3/50,52.	4 th Chapter	4 th Chapter of Madhyamkhanda	Chpther 7/6
2	Synonym	Grahani	Grahani	Grahani	Grahani	Pachakasthana	Grahani
3	Sthana	Pakwa shaya Amashaya Madhyastha	Pakwa shaya Amashaya Madhyastha	Pakwa shaya Amashaya Madhyastha	Pakwa shaya Amashaya Madhyastha	Yakrut , Pleeha	Pakwa shaya Amashaya Madhyastha
4	No Of Kala	6 th	6 th	6 th	6 th	6 th	6 th

Sr. No.		Ha.Sa.	Bhe.Sa.	Vang.Sa.	Yo.Ra.	Rasaratna.	Bhai.Rat.	Gadani.	Chakra.
1	Refe rances	3/3	Su. 6 th Chapter Madyapr Ashana Su. 23 Vi. 3/10 Chi.3/10	Su. 13/68,69,70 Chi.14/244 Siddhi 3/24	Poorv ardha	16/203	8 th Chapter	3 rd Chapter	Su. 13/68, 69,70 Chi. 14/244 Siddhi 3/24

Pittadhara kala can be correlate with modern anatomy of duodenum, jejunum and ileum which connect Stomach (Amashaya) and Large intestine (Pakwashaya).

Inner linings of duodenum, jejunum and ileum detail studied in dissection on cadaver.

By knowing anatomy of organs and clinical anatomical correlation with several diseases, we can stop several morbid complications.

DISCUSSION

If we consider the serous membranes as kalas, the following are the prayojanas (purpose) of kalas. Serous membranes and their uses.

There are certain structures in our body that are likely to be injured due to external or internal influences. Some organs during their contractions are likely to undergo friction with the overlying structures. These organs are covered and protected by serous membranes. To certain extent they act as shock absorbers also. For Example: Pericardium - A serous membrane

covering the heart serves all the above mentioned purposes. Thus pleura over the lungs, peritoneum over the abdominal organs, Tunica vaginalis over the testes (meninges over the brain and spinal cord) are the serous membranes or kalas.

CONCLUSION

1. Detail study of kala sharira and pittadhara kala and its correlation with modern clinical anatomy of stomach, duodenum, jejunum, ileum and large intestine ; helps in diagnosing various diseases and emergencies of GI track like appendicitis, intestinal obstruction, paralytic ileus, small bowel perforation, DU perforation, Duodenal and jejuno ileal malignacies etc.
2. If these conditions are diagnosed clinically by knowing applied anatomy we can avoid further gravious complications like peritonitis, abdominal abscess, septicemia, shock, death.
3. For many procedures like feeding jejunostomy, peg tube insertion bowel resection anastomosis, ileostomy etc; clinical anatomy of Pittadhara kala helps.

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