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ABSTRACT

The word Grahani can be understood in three ways i.e. grahani avayava, grahani dosha & grahani roga. Any deviation from the status of Samagni i.e. Mandagni, Teekshnagni & Vishmagagni are called as Grahani dosha. This impaired agni leads to dooshana i.e. structural defect & functional impairment (vyaapaara vyaareetya) of grahani (grahani rupa naadi) resulting in Grahani roga.

KEYWORD: Grahni, Small intestine, IBS, Intestine.**INTRODUCTION**

षष्ठी पित्तधरा नाम या कला
परिकीर्तिता। पक्वामाशयमध्यस्था ग्रहणी सा
प्रकीर्तिता। प्रहण्या बलमग्निहि स चापि ग्रहणीश्रितः। तस्मात्
संघृष्टिते वह्नौ ग्रहणी संप्रदुष्यति
सर्वशश्चैवदोषरत्नच्छितिः एकश। सा दुष्टा बहुशो
भुक्तमाममेव प्रमुञ्चति ॥ पक्वं वा सरुजं पूति मुहुर्बद्धं
मुहुर्द्रवम्। ग्रहणीरोगमाहुस्तमायुर्बन्धविदोतच्चादृष्टहेतुकेन
विशेषेण पक्वामाशयमध्यस्थं पित्तं चतुर्विधमन्नपानं
पचति, जनाः ॥ सु० उ० ४० ॥ १६९- १७२

विवेचयति च दोषरसमूहपुरोषाणि। तत्रस्थमं च आत्मशक्त्या
शेषाणां पित्तस्थानानां शरीरस्य चान्निर्कर्मणाऽनुग्रहं करोति।
तस्मिन् पित्ते पाचकोऽग्निरिति सं॥ सु० सू० २१ ॥ १०

In view of Astanga Samgraha, “the sixth kala namely, pittadharakala, is situated between Amashaya and Pakwashaya, receives and holds the food (grahanam). It is because of this, is called as Grahani”. definitions and descriptions of Grahani as a pittadharakala. Grahani means to hold food & makes area bigger for the digestion, absorption and metabolic events. According to charaka Grahani is the seat of agni and it is situated above nabhi. It is not only the seat of agni but it is also supported and strengthened by agni and, it receives food. Grahani defines a diseased condition, in which the integrity and the function of the small intestine (known as grahani in Sanskrit) is compromised. Grahani is the principal seat of agni... the digestive fire. Normally, grahani holds up the meals, until it is digested and releases it from the site only, after digestion is over. But

when the function of grahani is compromised due to weakness in the digestive fire, it releases the ingested material even in undigested conditions. Grahani and Agni (the digestive-fire) are having mutual relationship which has been described as Adhara-Adheya-Sambandha in Ayurvedic system of medicine. Grahani has been mentioned as an Agni Adhishthana (malfunctioning of the digestive-fire) by a majority of the Ayurvedic physicians. Mandagni (low the digestive fire) is the root cause of Ama (enteric toxins). Ama is the critical factor for the manifestation of the majority of the diseases. Among these diseases, Grahani is the prime- disease of the digestive tract and patients are often seen in clinical practice. In Ayurveda, Agni is the base (mool) of life, which plays a key role in bio-transformation. In Ayurveda "Jathar Agni" means digestive fire and is present in stomach and duodenum. Grahani is the main site of Agni and both are interdependent. According to Ayurveda, the small intestine is correlated to Grahani, because of its property to restrain meal. Grahani is the place where digestion and absorption takes place. It is nourished by the strength of Agni. 'Mandagni' is one type of vitiation of Agni, which means weak digestive fire. The food is not digested properly due to Mandagni, which leads to Ama Dosha (accumulation of endotoxins), it is the crucial factor responsible for most of the diseases. The human body is said to be a vehicle for spiritual experience whose form and function is generated according to individual choice or desire (Prakruti).

Sthana (Position of Grahani)

षष्ठो पित्तधरा नाम पक्वामाशयमध्यस्था।
ह्यन्तरमन्नेरधिष्ठानतयासा आमाशयात्पक्वाशयोन्मुखमन्नं

बलेन विधार्य पित्ततेजसा शोषयति पचति पक्वं चविमुञ्चति । दोषाधिष्ठिता तु दौर्बल्यादाममेव। संज्ञा बलं च तस्याः पित्तमेवाऽग्न्यभिषानमतः

सारज्जिनोपस्तब्धोपवृंहितेकयोगक्षमाशरीरं वर्तयति।।
ततोऽसावप्तस्य ग्रहणात् पुनर्ग्रहणी अग्न्यधिष्ठानमन्नस्य
ग्रहणाद् ग्रहणी मता। ह्यग्निबलोपस्तम्भवृंहिता।।पक्वं
सुजंति पार्श्वतः। दुर्बलाग्निबला दुष्टा त्वाममेव विमुञ्चति ।।
च० चि० १५।५६-५७

According to Charaka Grahani is the seat of agni and it is situated above nabhi. It is not only the seat of agni but it is also supported and strengthened by agni and, it receives food. Susruta opens that “the sixth kala, is described as pittadharakala, and situated between amashaya and pakwashaya and it is named as **GRAHANI**. Su.sha. 4/18

Ayurveda Describes Four Different Types of Grahani

- Vata grahani (Malabsorption caused by vitiation of the biological air): In vata grahani, constipation is the predominant symptom.
- Pitta grahani (Malabsorption caused by vitiation of the biological fire): In pitta grahani, diarrhea is the predominant symptom.
- Kapha grahani (Malabsorption caused by vitiation of the biological water): In kapha grahani, dysentery is the predominant symptom.
- Tridosha grahani: In this case, all the three biological humours are involved. Other texts have mentioned two varieties of grahani accrual (samgraha grahani) (accrual malabsorption) and an incurable type called ghatiyanthra grahani (tympantitis predominant malabsorption). This has been described as sangrahani.

DISCUSSION

A careful analysis of the foregoing present for distinct views offered by modern authorities on Ayurveda viz,

- Grahani is pyloric orifices.
- Grahani is duodenum.
- Grahani is small intestine epithelial layer and
- Grahani extends from pylorus to ilio-cecum including the two sphincters.
- Grahani extends from amashaya to pakwashaya

“CharakaSamhitha” According to Ayurveda acharya prof Dhamodar Sharma Gowda GRAHANI may be called as: Agnithana, agniadhisthana, agnaashaya, anthrani, antrahaya, kshudrantra, kshudrantavayavagrahani, grahaninadi, tejapata, dahanashaya, pakwamashayamadyampachhamanashaya, pachakashaya, pittadharakala, pittashaya, purithat. The anatomy, physiology and pathology of Grahani may be summarized as follows- According to Dr.Bynarjee Anatomically Grahani is situated (1) above the nabhi(2)

between the pakwashaya and amashaya (3) at the gate of pakwashaya (4) it is like a membrane (kalaa). Physiologically (5) seat of agni (agnyadhisthanam) (6) receptor of food (7) it activates and suppresses the strength of the agni (8) forcibly separates and digests the undigested food (9) evacuates the fully digested food by side. Pathologically (10) evacuates the undigested food before being digested. All these indicate the seat of grahani to be in the small intestine.” —by Dr. BynarjeeDheku Ayurveda ShariraPrusta 282 (Parishabddhashabddharthashariram).15(B)

According to the modern anatomy

The small intestine or small bowel is an organ in the gastrointestinal tract where most of the end absorption of nutrients and minerals from food takes place. It lies between the stomach and large intestine and receives bile and pancreatic juice through the pancreatic duct to aid in digestion. The small intestine has three distinct regions the duodenum jejunum and ileum. The duodenum, the shortest, is where preparation for absorption through small finger-like protrusions called villi begins. The jejunum is specialized for the absorption through its lining by enterocytes: small nutrient particles which have been previously digested by enzymes in the duodenum. The main function of the ileum is to absorb vit-B12, bile salts, and whatever products of digestion were not absorbed by the jejunum.

Special Feature of Small Intestine Absorption

Digested food is now able to pass into the blood vessels in the wall of the intestine through either diffusion or active transport. The small intestine is the site where most of the nutrients from ingested food are absorbed. The inner wall, or mucosa, of the small intestine is lined with simple columnar epithelial tissue.

Structurally, the mucosa is covered in wrinkles or folds called placae circulares, which are considered permanent features in the wall of the organ. They are distinct from rugae which are considered non-permanent or temporary allowing for distention and contraction.

Immunological

The small intestine supports the body's immune system. The presence of gut flora appears to contribute positively to the host's immune system. Peyers patches, located within the ileum of the small intestine, are an important part of the digestive tract's local immune system. They are part of the lymphatic system, and provide a site for antigens from potentially harmful bacteria or other microorganisms in the digestive tract to be sampled, and subsequently presented to the immune system.

The ‘Small’ Intestine has been mentioned as Grahani in Ayurvedic system of medicine. Literally, Grahani means ‘that holds’. The small intestine is a long organ and consisting of three main layers and.

Mucosal: The innermost layer of the grahani (small intestine) is a complex but dynamic site of identification of six tastes (diet-chemistry). Small intestine contains hair like structures, known as villi, which pushes the food particles towards the deeper layers.

Muscular: The muscular layer performs action through the process of peristalsis (alternating contracting and relaxation). For this apparent reason, grahani has been classified mostly as mamsa...muscle tissue in Ayurveda.

Serosal: The function of the serosal layer is to interface with the general circulation so as to perform the assimilation of micro and macronutrients.

Indrabir Singh's Text book of Human Histology 7th edition¹⁶ In small intestine structure like plicae circularis (valves of kerck ring) are macroscopically visible, crescent-shaped folds of the mucosa and submucosa. Plicae circularis extend around one-half to two-thirds of the circumference of the lumen of the small intestine.

अन्नमादानकर्मा तु प्राणः कोष्ठं प्रकर्षति। तद्द्रवैर्भिन्नसङ्घातं स्नेहेन मृदुतां गतम् ॥६॥

समानेनावधूतोऽग्निरुदर्यः पवनोद्वहः। काले भुक्तं समं सम्यक् पचत्यायुर्विद्वद्ये ॥७॥

एवं रसमलायान्नमाशयस्थमधः स्थितः। पचत्यग्निर्यथा स्थाल्यामोदनायाम्बुतण्डुलम् ॥८॥

The ingested food is carried to koshtha by prana vata. The food disintegrates because of the liquids, and further it becomes soft because of the fatty substances. The samana vata, that has an inherent ability to intensify the agni, intensifies the digestive enzymes and properly digests the food that one consumes timely and in an appropriate quantity, thus leading to longevity. This process of digestion by agni in the gut which leads to the formation of rasa and mala is comparable to the process of cooking of the raw rice kept in an earthen vessel containing water on a fire.

अधस्तु पक्वमामं वा प्रवृत्तं ग्रहणीगदः। उच्यते सर्वमेवान्नं प्रायो ह्यस्य विदहयते ॥५२॥

अतिसृष्टं विबद्धं वा द्रवं तदुपदिश्यते। तृष्णारोचकवैरस्यप्रसेकतमकान्वितः ॥५३॥

शूनपादकरः सास्थिपर्वरुक् छर्दनं ज्वरः। लोहामगन्धिस्तिकताम्ल [१७] उद्गारश्चास्य जायते ॥५४॥

When partially digested and partially undigested bio substances moves downward in gastrointestinal tract it produces a disorder known as grahanigada. In this particular stage the entire food material remains in the state of vidagdha state (partially transformed/sour). In this condition the individual may pass stools in excessive

quantity or frequency wherein stools may be loose, with thin consistency or in the form of pellet like stool/bound stool (vibaddham) and morbid thirst, anorexia, distaste, excessive watering of mouth, blackout, edema of legs and hands, pain in bones and finger joints, vomiting, fever, eructation having either metallic smell or undigested food and having bitter or sour taste are observed.

या चतुर्विधमन्नपानमामाशयात् प्रच्युत पक्वाशयोपस्थितं थारयति। अप्रवहानां स्रोतसामामाशयो मूलं, वामं च पार्श्वम् ॥ अशितं खादितं पीतं लीहं कोष्ठगतं नूणाम्। तज्जीर्येति यथाकालशोषितं पित्ततेजसा ॥ सु०शा०४॥१८॥१९

पित्तमतान्तरग्निसंजकस् । आमाशयात्प्रच्युत कफाशयाद् अण्टं, पववाशवोपस्थितं पक्वाशयां-गमनायोपस्थितं पित्तस्थानं संप्राप्तम्, धारपति 'पाकार्थम्' इति गेषः। यथाकारले कालानति-कमेण तीपणमध्यमन्दानिषुमात्वाद्यगुरुलपूचितराकानतिकमेण ॥ नाभेरुपरिधारयत्यन्नअपक्वंउपस्तम्भिता इति अग्निना पित्तव्पापारकरणेन अनुकूषिता । उपबृंहितेति अग्निना बृंहणम्पापारकरणेन सशक्तीकृता।दुष्टादितिदोषदुष्टा ॥ चक्रपाणि

Grahani is seat of agni and it is so called since it holds/retains the food (for proper digestion and assimilation). It holds the food just above the umbilical region and it is supported and nourished by the agni. Grahani with help of agni holds the undigested food and pushes forward digested food, but when agni becomes weak and vitiated due to vidagdha ahara murchita dosha (afflicted by improperly digested food) i.e sama dosha(dosha associated with ama) it vitiates the grahani and releases food in the form of ama i.e. undigested form. Disease is produced only at the site of abnormality of body systems. If the rules of diet and dietary habits are not followed due to greed, then disease of grahani occurs. The annavisha (toxins) produced due to improper digestion and metabolism causes diseases at the sites of affliction. The vishamagni (improper agni) causes irregularity in digestion and therefore defective formation of dhatu takes place. Whereas, teekshnagni (excessive agni) when associated with little quantity of fuel (in the form of food) causes depletion of dhatu (tissue elements). The digestive disorder of grahani can lead to secondary disorders related with other body systems along with digestive system. There are three stages of digestion in the gut. The first stage (madhura) takes place in the upper gastro-intestinal tract, i.e., inside the esophagus and stomach; the second stage (amla) takes place in the middle portion of the gut, i.e., in the small intestine; and the last stage (katu) takes place in the colon. The froth-like kapha seems to be the thick mucus that covers the entire stomach, providing a protective

coating that prevents the gastric mucosa being digested and damaged due to the acid-pepsin mixture. Accha pitta is 'liquid' in nature, released in the duodenum and can be correlated with bile. Pachaka pitta has the functional site between amashaya (stomach) and pakvashaya (colon), which is indicative of small intestine. It is composed of five mahabhutas but the agni mahabhuta is predominant; and hence, it becomes devoid of fluidity and therefore is also known as agni. It splits the food into sāra (nutritive) and kitta (non-nutritive) portions. (Ashtanga Hridaya, Sutra Sthana, 12/10-12).

Genetic factors (bija dushti) almost all patients with celiac sprue express the HLA-DQ2 allele. Environmental factor, gliadin a component of gluten that is present in wheat, barley and rye contributes to the disease. Immunologic component (prayatna, bala and urja of vata, kapha and pitta respectively), serum antibodies IgA anti gliadin, IgA antiendomyasial and IgA antibodies and IgG antibodies are present. In addition, gliadin peptides may interact with gliadin specific T cells that may either mediate tissue injury or induce the release of one or more cytokines that cause tissue injury.

CONCLUSION

- By considering all authors view about GRAHANI (pittadharakala) Pittadharakala is aagnisthana and is also called agnaashaya and kshudantara, pakwaamashayamadhya. Pittadharakala is nothing but where the pachaka pitta secrets.
- According to Chakrapani Adhoamaashaya means small intestine upto ileo-cecal junction. Grahani means small intestine. ("Pittasthaneshuamaashayetiamaashayadhobhaga") According to Sushrut pittadharakala is present in amashaya and pakwashaya means it is a epithelial layer present in stomach and small intestine and cecum and ascending colon. which is nothing but lining epithelial of intestine. This layer helps for digestion and absorption. The plica circularis play very important role to hold make the area 8 times more distension and helps for Grahana (GrahamathGrahani).
- Sharangadhar says "Pittadhara kala lies between aamashaya and pakwashaya". Dr.B.N.Bynarjee "Grahani means the whole of small intestine". As per the grahaniroga / Tropical Spure.
- Usually atrophy of small bowel ulceration and erosion of the ileum or destruction of the internal villi or secondary changes. It may be stated that in general grahanidosa may represents the function of small bowel in ileum or changes in the structure or small intestine. Nabhi means umbilicus, diaphragm, heart, umbilical region, centre point, kostanga as per reference.
- Grahani is not a kostanga by three main authorities, charaka, susruta, and vagbhata. Above Nabhi (Nabhirupari) is not a seat of duodenum.
- By considering all above points grahani is not duodenum it may be lining of epithelial of small intestine.

Although Grahani is predominantly a pitta disease, one must take care for other biological humour vata and kapha. In addition, addressing the mind/body relationship is of prime importance alongwith health lifestyle and dietary choices. Although Grahani Roga is primarily a pitta disorder, one must take into account the metabolic power and intelligence (Agni) of both Vata and Kapha doshas. Additionally, the mind/body relationship is to be retrained in sound lifestyle choices such as food combining and timing of eating. Craving for all types of food (griddhi sarvarasanam) is seen due to malabsorption of various elements, mineral and vitamins causing deficiency of the essential requirements of elements. The negative feedback system creates the craving for essential elements which is presented in the form of craving for all six rasa. Rasa should be understood for food which will fulfill the requirements.

REFERENCES

1. Brahmanant Tripathi, MadhavaNidana, Vol -1, Choukambha Surabharati Prakashan, Edition, 2012; 232-279.
2. Hari Sadasiva Sastri Paradakara, Ashtanga Hrudaya tika, Choukambha Sanskrit sansthan, Repint, 2012; 496.
3. JadavjiTrikamjiAcharya,Charak Samhita, Choukambha Prakashana, Varanasi,Reprint edition, 2011; 103-189.
4. JadavjiTrikamjiAcharya and Narayan Ram Acharya, SusrutaSamhita, Choukambha Sanskrit Sansthan, Varanasi, Reprint edition, 2012; 154: 709-710.
5. K.R. Srikanta Murthy, Ashtanga Sangraha, Vol -2, Choukambha Orientalia, Varanasi, Reprint edition, 2012; 64-195.
6. Naveen Chandra N.H., Text book on Clinical Biochemistry and Haematology, Published by the Author, SDM College of Ayurveda, Kuthpady, Udupi, First impression, 2015; 163-260.
7. MODERN ANATOMY, Indrabir Singh's Text book of Human Histology 7th edition.