



GRAHANI DOSHA DURING CHILDHOOD PERIOD: A REVIEW STUDY

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ABSTRACT

Routinely pediatricians come across with a good number of patients suffering from diseases related to gastrointestinal tract. The common feature of GIT disorder are abdominal pain, bowel disturbances (like sometimes diarrhea & sometimes constipation), nausea, vomiting, anorexia, chronic flatulence. This leads to failure to thrive & are important contributors to the pool of malnutrition in developing nations. In Ayurvedic classics *Grahani* is known as *Agni Adhithana*. *Grahani* and *Agni* are interdependent & whenever *Agni Vikriti* (especially *Mandagni*) occurs, cause improper digestion of ingested food which leads to *Grahani Dosha*. Untreated *Grahani Dosha* ensues with symptoms like *Udarashoola*, *Adhmana*, *Kshudhalpata*, *Avipaka*, *Muhurbaddha Muhurdrava Mala Pravrtti*, *Durgandhita Mala Pravrtti*, *Bala Kshaya* etc. Specific features of a child like *Sarvannanupa Sevana*, *Aniyatagni*, *Asamatvagata Prana Dosha Dhatu Balaoujasam* etc. shows the delicacy of children & hence it is difficult to treat them.

KEYWORDS: *Grahani*, *Grahani Dosha*, *Gastrointestinal disorder*, *Mandagni*.

INTRODUCTION

At least 20% of the children will consult a physician for abdominal pain by age of 15 years. Nearly 10 to 15% of school children experience recurring abdominal pain at some time.^[1] The GIT disorders i.e. diarrheal illness are important contributors to the pool of malnutrition in developing nations. Diarrhea can cause under nutrition and worsen the existing one. Thus, these illnesses affect growth & development, activities, social behavior, concentration power, school performance and immunity etc. of the children.^[2]

Acharya Sushruta in *Atishara Prakaran* says that *Atisara* is as one of the predisposing factor for *Grahani Dosha*. Acharya Vagbhata describes *Arsha*, *Atisara* and *Grahani* Vikara as '*Anyonya Nidana Bhuta Vyadhi*', of which *Agni Vikriti* (especially *Mandagni*) is the root cause. In Ayurvedic classics *Grahani* is known as *Agni Adhithana*.^[3] *Grahani* and *Agni* are interdependent & whenever *Agni Vikriti* (especially *Mandagni*) occurs, causes improper digestion of ingested food which leads to *Grahani Dosha*, if it is left untreated *Grahani Dosha* ensues with symptomatology like *Udarashoola*, *Adhmana*, *Kshudhalpata*, *Avipaka*, *Muhurbaddha Muhurdrava Mala Pravrtti*, *Durgandhita Mala Pravrtti*, *Bala Kshaya* etc.

The problems of children differ considerably from those of adults and from the point of view of medical

therapeutics, "a child cannot be considered as miniature adult". So, here an attempt has been made to review the concept of *Grahani Dosha* during childhood period.

Grahani

The word *Grahani* is derived from '*Graha*' *Dhatu*, general means, to catch, to hold or to get. In this context, this is ascribed to be the action of holding something firmly or mitigating the strength of particular subject, say *Agni*.^[4] In Ayurvedic classics, the organ *Grahani* is described as an organ of digestion. Acharya Charak says, *Grahani* is the *Agni Adhithana* and is located above *Nabhi* (umbilical region). Normally, it receives the ingested food, which is retained by it by restraining the downward movement (*Grahanati*). After digestion it releases the food through sides of lumen to next *Ashaya* i.e. *Pakwashaya*. In abnormal conditions due to weakness of *Agni*, it gets vitiated and releases food in undigested form. Acharya Sushruta says, the sixth *Kala* known as *Pitta Dhara Kala* is situated between *Amashaya* and *Pakwashaya*, and it is stated to be *Grahani* which is seat of *Pachagni*.^[5] In the other hand *Ashtanga Samgraha* mixed opinion of both *Charaka* and *Sushruta* as the sixth *Kala* namely *Pitta Dhara Kala*, situated between *Amashaya* (stomach & small intestine) and *Pakwashaya* (large intestine), receives and retains the food (*Grahanama*) because of this it is called as *Grahani*.^[6] Acharya Vagbhata in *Ashtanga Hridaya* writes that *Grahani* (*Pitta Dhara Kala*) is the organ of

Mahasrotasa, which is a seat of *Agni* (i.e. *Pachaka Pitta*) and it receives and retains food

The functional integrity of *Grahani* depends upon status of *Agni*. The interdependent nature of these two is entirely responsible for proper functioning of both so proper functioning of one will ultimately boost the functioning of other and combined effect of both these will results in procurement of *Bhavas* needed for *Pushti* of *Ayuradi*. It is the very basic concept in understanding pathology, course of disease, treatment of *Grahani Dosha*. *Grahani* (duodenum with pyloric sphincter, ascending colon transverse colon) performs the functions like, retention of food in the stomach, receive the food, help in the process of digestion, provide adequate time to digest the food & provide beneficial factors like *Ayu*, *Varna*, *Bala*, and *Swasthya* etc.

According to *Ayurveda*, *Kledaka Kapha*, *Pachaka Pitta* and *Samana Vayu* are the main *Doshas* confined to the organ *Grahani*. The *Kledaka Kapha* is said to be located in the *Amashaya*, moistens the food brought to this place, disintegrates, breaks and liquefies it. It may be correlated with Gastric mucus (mucin), a thick, viscous fluid, moistens the food and loose its molecules, especially the protein molecules before they are acted upon by the pepsins. The concept of *Pachaka Pitta* pointed to secretion secreted by *Pitta Dhara Kala* in the *Grahani*, corresponding to mucosal glands of duodenum. Some of them exercise a regional influence and others, systemic, particularly metabolic. *Samana Vayu* is stated to reside near *Agni Sthana*, exercising control over intestinal digestion. It helps in *Agni Sandukshana* (i.e. the secretion of digestive enzymes increased by enteric nervous system), *Vivechan* (absorption) of the digested food and *Munchan* (progression).

Gastro intestinal digestion of food has been described as *Avastha Paka* in the *Amashaya* (stomach and small intestine) and *Pakwashaya* (large intestine) part of *Grahani*. *Acharya Charaka* described two terms regarding the process of *Pachana* i.e., *Prapaka* and *Vipaka*.

The term *Prapaka* has defined by *Chakrapani* as *Pratham Paka* (i.e. first primary change), involve the 3 stage, namely *Mahur Awastha Paka*, the insoluble *Madhura* portion of food becomes sufficiently soluble and mixed with soluble under the influence of *Kledaka Kapha*; *Amla Awastha Paka*, the outcome of this phase of digestion is the production of acidified chyme, which has been characterized by both *Charaka* and *Vagbhata* as *Pakwapakvam* or *Kinchit Pakvam* *Kinchit Apakvam* i.e. partly digested. The food in this stage is not yet fit for absorption and utilization in metabolic processes described by *Ayurveda* as *Dhatvagni Paka* (*Nistha Paripaka*); The third aspect of *Avastha Paka* is *Katu Awastha Paka*, this specifically relate to the way in which the food residue or *Anna Kitta* is dealt in this part of GIT, says *Charaka* 'the material passed down from the

Amashaya, having reached the *Pakwashaya* is dehydrated and converted in to lumps by heat an acrid and pergent gas being produced in this process.

On the other hand the term *Vipaka*, has been defined by him as changes to which the food that has undergone *Prathama Paka* is subjected to further changes under the influence of *Jatharagni* (*Pachaka Pitta*). These latter changes have been described in terms of the *Rasa* of the end products of gastrointestinal digestion viz. *Madhura*, *Amla* and *Katu*.^[8]

Grahani Dosha

The disease *Grahani Dosha* is the leading disorders of *Annavaha Srotasa* caused by *Ahitashana*, *Ahitashana* includes faulty dietary habits like *Adhyashana*, *Samashana*, *Viruddhashana* etc. This disease entity engenders from impairment of *Agni* (Mainly *Mandagni*) i.e. *Agni Dushti*. Thus, *Agni Dosha* (malfunctioning of enzymes responsible for digestion) is main culprit in causation of *Grahani Dosha*. *Mandagni* brings about *Vidaha* (a part which is digested and the other part remaining without digestion) of the food, which moves upwards and downwards in the gastrointestinal tract. When this *Pakwa-ama* moves down wards, then it leads to the disease *Grahani Gada*. The symptomatology like, *Arochaka* (Anorexia), *Asya Vairashya* (Distaste in mouth), *Trisha* (excessive thirst), *Chhardana* (vomiting), *Praseka* (excessive salivation) of *Grahani Dosha* shows strikingly similar with sympomatology of *Annavaha Srotodusti*.^[9] According to *Acharya Charaka*, the two main feature of *Grahani Roga* are; *Durbala Agnibala* (weak digestive power) and *Dushta* (Abnormal condition) Mainly 4 types of *Grahani Dosha* are available in the classics as *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja*.

Significance of Grahani Dosha in paediatric age group

The specific feature of a child like *Dosha Dushya Malalpata*, *Soukumaryata*, *Alpakayata*, *Sarvannanupasevana*, *Aparipakwa Dhatu*, *Asampurna Bala*, *Kleshahishnutwam*, *Aniyatagni*, *Asamtvagata Prana Dosha Dhatu Balaoujasam* Shows the lowered *Bala* Status & hence immune system. Therefore special attention must be needed in case of children. Any factor affecting this period will not only disturb the growth as well as development of child but will certainly affect its day-to-day physical and mental activities, social and psychological behaviors, concentration and school performance and finally compromise the immune system, which ultimately result in developing multiple clinical syndromes. *Acharya Kashyapa* in *Phakka Chikitsa*, stated that, children of *Pradustha Grahani* and who indulges in excessive eating, whatever they eat due to *Mandagni* all go to *Aparthaka* (waste) and the disease *Phakka* engenders which signifies severe growth and developmental delay.^[10] From above fact, we can say that the nutritional demand for the proper growth of the *Rasa Raktadi Dhatus* and mental faculties (development) depends upon proper function of *Grahani*. The modern

medical science strikingly indicates that, children constitute most vulnerable age group having high incidence of recurrent GIT disturbances. These includes the most vulnerable group have high incidence and recurrence of gastrointestinal disorders like reduced appetite, chronic abdominal pain, nausea, vomiting, abdominal distension, passing of loose stool just after taking meal (gastrocolic reflex), chronic diarrhoea, irritable bowel syndrome, inflammatory bowel disease (Crohn's disease and ulcerative colitis), tropic spur and mala absorptive syndromes which ultimately lead to Protein Energy Malnutrition & iron-vitamins-mineral deficiencies and ultimately failure to thrive; if these conditions remains untreated, the situation become more serious, for which parents seek opinion of pediatrician.

Purva Rupa of Grahani Dosha

Trishna (excessive thirst), *Alasya* (Lethargy), *Anaha* (Tympanitis), *Antra-Kujana* (Intestinal gurgling), *Aruchi* (Anorexia), *Asya Vairasaya* (Distaste in mouth), *Bala-Kshaya*, *Bhrama* (Vertigo), *Chhardi* (Vomiting), *Gaurva* (Heaviness of body), *Klama* (Fatigue without exertion), *Prasheka*.

Samanya Rupa of Grahani Dosha

Muhurbaddha-Muhurdrava Mala Pravritti, *Ati Srushta Mala Pravritti*, *Vibbadha Mala Pravritti*, *Trishna*, *Arochaka*, *Vairashaya*, *Prasheka*, *Padakara*, *Chardana*, *Jwara*, *Lohanugandhi Udgara*, *Daha*.

Samprapti Ghataka of Grahani Dosha

- *Nidana* : *Aharaja, Viharaja, Manasika Karanas*
- *Dosha* : *Kledaka Kapha, Pachaka Pitta, Samana Vayu*
- *Dushya* : *Rasa (Ahara Rasa)*
- *Agni* : *Jatharagni-Mandya*
- *Ama* : *Amavisha formation at GIT level*
- *Srotas* : *Annavaha, Purishavaha, Rasavaha Srotas*
- *Strotodusti* : *Sanga, Vimarga-gamana, Atipravriti*
- *Udbhavasthana* : *Amashaya*
- *Rogamarga* : *Madhyama and Bahya Roga Marga*
- *Vyadhiswabhava* : *Chirakari*
- *Adhisthana* : *Grahani*

Clinical importance of *Sama* and *Nirama Lakshana* of *Purisha* in *Grahani Dosha*: These are considered to be similar to that of *Atisara*. The *Sama Lakshana* of *Purisha* is *Durgandhita* (Foul smelling stool), *Picchilata* (Sticky stool) and sinks in water. The *Nirama Lakshana* of *Purisha* is Opposite of above qualities, *Laghu* and floats in water.

Principle of Grahani Dosha Chikitsa

Agni Mandhya is important factor in the *Samprapti* of the *Grahani Dosha*. Considering this factor *Grahani Dosha*

should be mainly treated by *Deepana Pachana Chikitsa*. For this, *Acharya Vagbhata* suggested that, all the treatment modalities of *Ajeerna* should be implemented in the management of *Grahani Ashrita Dosha*. He also opines that, *Sama* and *Nirama Avastha* should be taken into account as per *Atisara Chikitsa*. Regarding the *Chikitsa Sutra* of *Grahani Dosha* one thing is found very common by all the *Acharyas* is that to treat *Grahani Dosha* like *Ajeerna* and *Atisara*. The disease *Ajeerna* is caused by *Mandagni* in which there is production of *Amadosha*. During the stage of *Amadosha* the *Jatharagni* become so weak, this is not able to digest the ingested food and even medicine too. The authors of Ayurvedic classics have laid emphasis on the administration of *Takra* or *Takra Siddha Kashaya* as the main diet and medicine. Explaining the advantages of *Takra* over other articles of diet in *Grahani Dosha Vagbhata* says "*Takra* is the best diet for patients suffering from *Grahani Dosha*, as the *Takra* is *Laghu* in *Guna*, possesses *Deepana* properties and attains *Madhura Paka*, it does not provoke and increase *Pitta*; because of *Kashaya Rasa*, *Ushna Veerya*, *Vikasi* and *Ruksha Gunas* it is useful in *Kapha*. The advantage of *Takra* is that it contains less fat and is easily digestible. *Acharya Charaka* has also suggested the use of *Takra* and *Takrarishta* in the routine treatment of *Grahani*. Use of *Deepana Pachana* drug like *Chitrakadi Vati*, *Hingawastaka Churna*, *Balachaturbhadrha Churna*, *Rajanyadi Churna* etc. give an excellent result in *Samprapti Vighatana* i.e. treatment of disease *Grahani Dosha*.

General principle regarding medication of pediatric age group: The dose of medicine for children should be very small and appropriate to the disease. The wise physician should carefully administer sweet and astringent drugs which are mild in nature to the child. Medicines, diet and drinks which are unctuous (*Ruksha*), hot (*Ushna*), sour, pungent and heavy (*Guru*) are contraindicated in children. *Acharya Kashyapa* has contraindicated *Shodhana* regimen in children while describing *Shodhana* and *Shamana* concept in *Balayawastha*.^[11]

DISCUSSION

The word *Grahani* is derived from 'Graha' Dhatu, general means, to catch, to hold or to get. In this context, this is ascribed to be the action of holding something firmly or mitigating the strength of particular subject, say *Agni*. *Acharya Charaka* says, *Grahani* is stated to be *Agni Adhisthana*³ and it is located above *Nabhi*. *Acharya Sushruta*, *Acharya Vagbhata* and *Sharangdhara* opine that the sixth *Kala* (extending between *Pakwashaya* and *Amashaya*) is to be considered as *Grahani*. In *Vaidyaka Shabda Shindhu*, it is clearly mentioned that that the first part of intestine which is seat of *Agni* can be considered as *Grahani*. The organ *Grahani* also includes jejunum and ileum, which is having mucosal folds (plicae circularis or valves of Kerkring, villi and microvilli). *Grahani* is stated to be *Agni Adhisthana*. The *Agni* is said to be *Pittantaragata*, so the various digestive enzymes

secreted by pancreas like trypsin, chymotrypsin etc. have very important role in digestion of ingested food. Thus, the pancreatic secretion which is clear in appearance can be correlated with *Achchha Pitta* which is mentioned in *Ayurveda*. From the above description, finally we can say that the *Grahani* performs the functions like retention of food in the stomach, receives the food, helps in the process of digestion, provides adequate time to digest the food and provides beneficial factors like *Ayu*, *Varna*, *Bala*, *Swasthya* etc. The *Dosha* confined to organ *Grahani* are *Kledaka Kapha*, *Pachaka Pitta* and *Samana Vayu*. The *Kledaka Kapha* can be compared with mucus secretions in the stomach and small intestine. The *Pachaka Pitta* (digestive enzyme in stomach and small intestine) and *Achchha Pitta* (the pancreatic digestive secretions) carry out the process of digestion. The *Samana Vayu* can be correlated with the enteric nervous system which regulates various propulsive and mixing, and digestive mechanisms in the gut. When the vitiated *Doshas* get indulge to the organ *Grahani*, then it should be called *Grahani Dosha*. The continuous indulgence of *Agni Vikritikara* Hetus may produce *Agni Dosha*, which ultimately leads to *Grahani Dushti*, and results in various malabsorption syndromes affecting several systems of the body. *Acharya Shrikanthadatta* has specifically quoted that, "*Grahani Dosham Iti Grahaniroga Arambhakam Vatadikam*". Clinical features of *Grahani Dosha*; the Pathogenesis of the disease is confined to *Annavaha Srotas*, which is clear as *Charaka* has described *Pakwashayastha* and *Linawastha* after describing the '*Grahani Dosha*'. So the symptoms, mentioned in *Charaka* and *Astanga Hridaya*, supports its localized *Samprapti* which is manifested as *Praseka*, *Aarti*, *Annaodharata* etc. In the *Samprapti* of the disease *Grahani Dosha*, *Agni Mandhya* is important factor. Considering this factor *Grahani Dosha* should be mainly treated by *Deepana Pachana Chikitsa*. The *Deepana Pachana* drug like *Chitrakadi Vati*, *Hingawastaka Churna*, *Balachaturbhadra Churna*, *Rajanyadi Churna* etc. useful in treatment of disease *Grahani Dosha*. *Acharya Vagbhatta* suggested that, all the treatment modalities of *Ajeerna* should be implemented in the management of *Grahani Ashrita Dosha*. Keeping in the view regarding lowered *Bala* status during childhood period the dose of medicine for children should be very small and appropriate to the disease. The *Kaumar Bhritya Bhishaka* should carefully administer sweet and astringent drugs which are mild in nature to the child.

CONCLUSION

Grahani is stated to be *Agni Adhithana*. Small intestine (along with pyloric sphincter and ileocecal sphincter) and part of large intestine like cecum, ascending and transverse colon can be anatomically and physiologically considered as *Grahani*. But the duodenum, part of *Grahani* is found to be most functional and controlling part of *Grahani*. *Mandagni* play an important role in the manifestation of disease. Considering this factor *Grahani Dosha* should be mainly treated by *Deepana Pachana* drugs.

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