



CRITICAL ANALYSIS OF GRAHANI ROGA W.S.R. TO MALABSORPTION SYNDROME

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ABSTRACT

Grahani dosha is one among the *Mahagadas*, which is the site of *Agni*, it is so-called because of its power to restrain the downward movement of undigested food and retain food till it is fully digested. It is supported and nourished by the strength of *Agni*. Functionally weak *Agni* i.e. *mandagni* causes improper digestion of ingested food and leads to *Grahani Roga*, presenting with symptoms of *Muhurbadha* and *Muhurdrava mala pravrutti*. Vitiation of *Agni* affects the digestion process and proper formation of further *dhatu*s affecting the nourishment of the body. Malabsorption Syndrome is a condition that causes insufficient assimilation of ingested nutrients, as a result of either maldigestion or malabsorption. Because of the similarities in symptoms like diarrhea, loss of appetite, anorexia, emaciation etc. it can be correlated with *Grahani Roga*.

Keywords: *Grahani Roga*, Malabsorption Syndrome, *Chikitsa*

INTRODUCTION

The prevalence of lifestyle disorders is on the rise in the current day. Gastrointestinal issues are very widespread in society as a result of tainted and irregular food consumption. Ayurveda considers the dysfunction of *Agni* to be the main cause of indigestion, which leads to a variety of functional and anatomical problems in the gastrointestinal tract¹. *Grahani* is a disease of great clinical prevalence in the modern era. Its prevalence is about 69% in the current epoch because of its direct link with faulty dietary habits and stressful lifestyles. Proper digestion of food is disrupted in *Grahani Roga* as a result of *Dushita jatharagni*. Undigested food creates a vitiated substance known as "Ama" which is responsible for a variety of ailments. This disrupts the GI tract's regular flora and weakens the muscles and acid fluid arrangement. As a result, the *Prasada Bhaga* of food is not formed properly, and the entire body is not nourished well.

Aim And Objective- To study *Grahani Roga* concerning Malabsorption Syndrome.

Materials And Methods- Materials related *Grahani* and Malabsorption Syndrome are collected from Ayurvedic text and textbooks of modern medicine respectively. The indexed and non-indexed journals were also referred to collect the required information regarding the relevant matter.

DEFINITION OF GRAHANI- Almost all the Ayurvedic classics have described the organ-*Grahani*, it is unanimously considered as an organ of digestion. The disease in which *Grahani* or small intestine gets vitiated and there is impairment of *Agni* is known as *Grahani*. *Grahani* is an important part of the *Maha Srotas* (GI System). According to Susruta, the 6th *Pittadhara Kala* situated between *Amasaya* and *Pakwashaya* is called *Grahani*². Charaka mentioned it as a part situated above *Nabhi*, it is the site of *Agni* and does *Grahana* of *Anna* and it is supported and nourished by the strength of *Agni*³. The *Grahani* is the leading disorder of the digestive system. Due to various etiological factors of *Grahani Roga*, the *Grahani* becomes impaired as a result of *Dushti* or vitiation *Pachakagni* and *Samana Vayu*. The logical

outcome of the *Grahani Dosha* is the malabsorption of ingested food, resulting in the production of *Pakwa Ama* secondly the malabsorption of the products of digestion. The *Vaishmya* at *Samana Vayu* causes the hypermotility of the gut resulting in the frequent evacuation of the bowel.

AETIOLOGICAL FACTORS: The pathogenesis of *Grahani Roga* revolves around *Agni dosha*. Any involvement of *Grahani* - like hyper, hypo and perverse functions may result in a corresponding disturbance of *Agni*. But especially *mandagni* predisposes *Grahani Roga*. Thus, an etiological factor of *Agnidushti* is the cause of *Grahani Roga*. So *Agnidushti* is the main cause of *Grahani Roga*.

NIDANA- The true etiological factors, which are stated to bring about *Agnidusti* are, *Abhojana*, *Samashana*, *Vishamashana*, *Viruddhashana*, *Ati bhojana*, Indigestion due to *Asatmya-bhojana*, *Atiguru-bhojana*, *Sheeta-bhojana*, *Sandushta-bhojana*, *Vishesha vyapad* of *virechana*, *vamana*, *snehana*, emaciation or wasting brought about by other diseases, *Viruddha* or incompatibility of *desha*, *kala*, *ritu*, *vega-vidharana*, mental, psychological and emotional instabilities like *irshya*, *bhaya*, *krodha*, *lobha*, *shoka*. Similarly, the etiological factors responsible to produce *Amadosha* mentioned by Acharya Charaka in *Vimana* 2/8-9 are also responsible for causing *Grahani Roga*.

PURVA RUPA⁴-Ayurveda literature unanimously mention – *Trushna*, *Alasya*, *Shirogaurava*, *Balakshaya*, *Vidaha*, *Chirapaka*, *Kayagaurava*.

RUPA: *Atisrutha mala Pravritti*, *Vibbadhamala pravritti*, *Arochaka*, *Vairasya*, *Praseka*, *Tamaka*, *Shunapadkra*, *Asthi Parvaruka*, *Chardi*, *Jwara*.

MALABSORPTION SYNDROME -Malabsorption syndrome (disorders) are conditions that cause insufficient assimilation of ingested nutrients as a result of either maldigestion or malabsorption⁵.

AETIOLOGY AND PATHOGENESIS- Malabsorption results from abnormalities of the three processes which are essential for normal digestion.

INTRALUMINAL MALDIGESTION- Impaired nutrient hydrolysis- The most common cause for

impaired nutrient hydrolysis is a deficiency of bile or pancreatic enzymes, which results in fat and protein malabsorption. Protein absorption usually occurs along with fat and carbohydrate malabsorption. It is characterized by intestinal inflammation and mucosal damage.

MUCOSAL MALABSORPTION- Results from small bowel intestinal epithelium, there by diminishing the surface area for absorption and depleting brush border enzyme activity.

POSTMUCOSAL LYMPHATIC OBSTRUCTION- Prevents the uptake and transport of absorbed lipids into lymphatic vessels. Increased pressure in these vessels results in leakage in to the intestinal lumen, leading to protein-losing enteropathy. Similarly, carbohydrates malabsorption is common and occurs with ingestion of poorly absorbed sugars like sorbitol or disorders of mucosa or defects of the intraluminal phase of digestion (exocrine pancreatic insufficiency). Malabsorption constitutes pathological interference with the normal physiological sequence of digestion, absorption and transport of nutrients. Intestinal malabsorption can be due to Mucosal damage, Congenital or acquired reduction in absorptive surface, Defects of specific hydrolysis, Defects of ion transport, Pancreatic insufficiency, Impaired enterohepatic circulation.

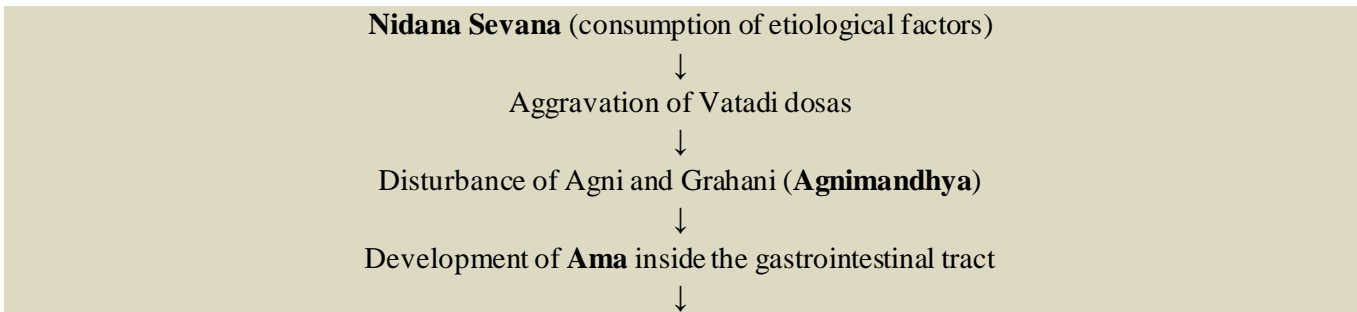
GRAHANI ROGA VIS-À-VIS MALABSORPTION SYNDROME

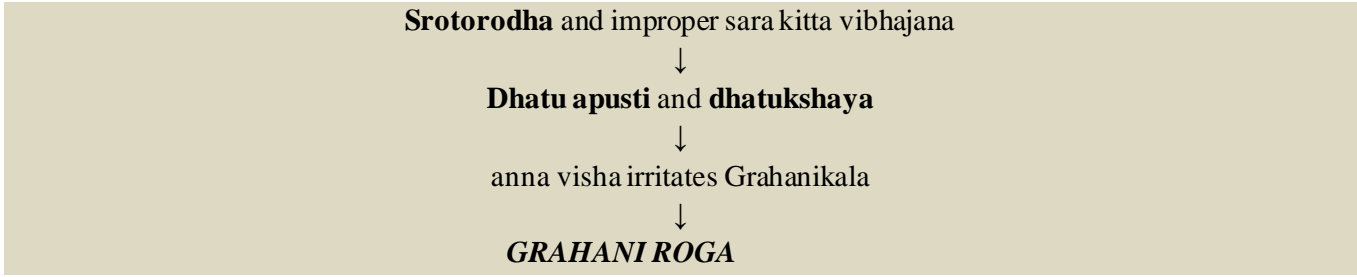
The presence of hydrochloric acid, in the stomach, is inimical to a large number of bacteria. Many of them are destroyed by salivary secretion and hydrochloric acid, and some of them which survive may enter into the intestine. In a hypothetical case where there is a deficient gastro-secretion, especially HCL, protein

digestion in the stomach may not only be disturbed, but the starch content of food may undergo fermentative changes (*Shuktatva*) yielding lactic acid, butyric acid, acetic acid and the protein may undergo putrefactive changes, resulting in the production of foul odour.

Since gastric emptying of the ingested food is dependent to a large extent, on the acidification of the chyme, which in turn stimulates the pyloric sphincter to open to allow the material to pass into duodenum. A deficit of acid secretion may lead to the retention of the food for a longer duration in the stomach than what is normal. The lack of acidity in the material that is propelled into the duodenum may result in either scanty production or non-secretion of the hormones of this area. As a result, the pancreas may not produce the required quantity and quality of pancreatic juice and the gallbladder may not discharge the bile properly contained in it. Thus, the pH of the duodenum will be disturbed. The overall outcome of these sequences may result in the disturbance of protein, carbohydrate and fat.

SAMPRAPTI OF GRAHANI ROGA- *Agnidushti* is the main cause of *Grahani Roga*. In this disease, due to *nidana sevana* primarily *Jatharagni* vitiated. Because of *Agnidushti*, ingested food is not properly digested and results in *Ampachana* and *Ama* formation, the food attains *shuktapaka*⁶. At this stage, *doshas* (i.e. *Kledaka kapha*, *pachaka pitta* and *samana vata*) sheltered in the organ-*grahani* gets vitiated and mixed with *Vidagadhaahara*, the *shuktapaka* stage leads to *Annavisha*. If proper care is not taken, then later it may spread in the whole body through *rasa*, and mixes with *doshas*, *dushya* or *dhatu*s, this leads to *Grahani Roga*.





PATHOPHYSIOLOGY OF Malabsorption classified into three categories; it may denote the various stage of *Grahani Roga*:

INADEQUATE DIGESTION (AGNIMANDHYA)-

It occurs mainly due to three causes-Pancreatic exocrine deficiency, Intra-luminal bile salt deficiency, Disaccharide’s deficiency. Due to the above causes, the digestion of food doesn’t happen properly, which can be considered *Agnimandhya*. The main symptoms of *Agnimandhya* are improper digestion, so it is the first stage of **GRAHANI ROGA**

INADEQUATE ABSORPTION (GRAHANI DOSA)-

There may be defective uptake of nutrients due to damage or scarcity of the absorptive epithelium e.g. Mucosal damage. It can be correlated with *Grahani dosa*, the main function of *grahani* or *pittadharakala* are *Grahana* (receiving of food materials), *Pachana* (digestion), *Shoshana* (absorption) and *Sara kitta vibhajana* (assimilation). So, if there is any disturbance in the function of *Grahani*, proper digestion and absorption can’t take place, therefore this type of malabsorption can be considered as *Grahani Roga*.

LYMPHATIC OBSTRUCTION (SROTORODHA)

- There may be defective transport of absorbed

nutrients from the mucosa of the systemic circulation due to lymphatic diseases. Here, due to improper digestion, *Ama* formation occurs and that causes *Srotorodha*, so *Rasadhatu* can’t circulate in the body, and it will lead to *Dhatukshaya*.

CLINICAL FEATURES

The clinical manifestations of malabsorption syndrome^{7,8} vary according to the underlying cause, some common symptoms are: Chronic 654diarrhea- a common mode of presentation is bulky highly offensive stools, sometimes watery stools, Abdominal distension, Abdominal pain, Anorexia, Weight loss, Undigested food in stool, Muscle cramps, Failure to thrive, Lethargy, Edema, Clubbing of fingers, Depigmentation of skin and hairs, Hemorrhagic diathesis, Eczema, Follicular hyperkeratosis, Stomatitis, Recurrent respiratory infections.

SOME OF THE DISORDERS CAUSING

MALABSORPTION⁹-Celiac Disease, Tropical Sprue, Bacterial Overgrowth, Whipple’s Disease, Short Bowel Syndrome, Irritable Bowel Syndrome

Table No: 1, Some of the disorder causing Malabsorption and its common Symptoms.

Common Symptoms of Malabsorption	CD	Tropical Sprue	Bacterial Overgrowth	Wipples Disease	Short Bowel Syndrome	IBS
Diarrhoea	✓	✓	✓	✓	✓	✓
Steatorrheas			✓		✓	
Abdominal Distension		✓		✓		✓
Abdominal Pain	✓					✓
Weakness	✓	✓				
Weight Loss	✓	✓	✓	✓	✓	

Table 2: Similarities in symptoms of Grahani Roga found in Malabsorption

CLINICAL FEATURES OF GRAHANI ROGA ARE ALSO FOUND IN MALABSORPTION	
GRAHANI ROGA ¹⁰	MALABSORPTION ¹¹
<ul style="list-style-type: none"> • <i>Ama or pakva malapravritti</i> 	<ul style="list-style-type: none"> • Stool-bulky, sticky, float
<ul style="list-style-type: none"> • <i>Balakshaya, alasya</i> • <i>Trshna, aruchi, jvara, Daurbalya</i> etc 	<ul style="list-style-type: none"> • Weight loss, malaise • Nutritional anemia
<ul style="list-style-type: none"> • <i>Asthi-Parvaruka</i> • <i>Chirakalanubandhi</i> 	<ul style="list-style-type: none"> • Bone pain osteopenia bone disease • Hypoproteinemia hypovitaminosis-chronic diarrhea/stomatitis
<ul style="list-style-type: none"> • <i>Parshva-uru-griva vedana</i> • Chronic diarrhea leads to <i>Artavajanana</i> and <i>strishuaharshanam</i> 	<ul style="list-style-type: none"> • Peripheral neuropathy • Amenorrhea and infertility

DISCUSSION

CHIKITSA¹²– The probable points can be enlisted as below:-

1. *Grahani Rogais* confined to *Annavaha srotas*.
2. Conditions have *Agnimandyata or Agni vikruti*,
3. Have a strong relationship with *Ama or Amanubandhata*.
4. Conditions manifest as improper digestion of food, *Prabhūta doshavastha*, sometimes *Vibaddha doshawastha* may also be countered.
5. Consumption of *Agni vikriti kara hetus* can be traced out.

So, because of all these reasons the general principle of treatment mentioned are-

Dosha pratyaneeka chikitsa – breaking up of the vicious circle phenomenon by ***pachana, deepana***

Vyadhi pratyaneeka chikitsa-by conceiving medicines properly (*deepana, pachana*)

Snehana-internal and external planned snehana are essential before purification.

Swedana- external planned swedana after snehana before purification

Followed by ***shodhana***, it is advised removing the *doshas* from the nearest root, from where they are accumulated. After *Aashayashuddhi*, several

recipes for *Agni deepana* is mentioned. ***Laghu ahara*** and appetisers with ***pachana choorna, lavana rasa ahara***, various recipes of ***takra. Jataragni Vardhana ghrīta*** should be used in the treatment of ***Grahani***. The treatment of *Grahani roga* should proceed on the full recognition of *Agnidusti*. *Grahani roga*, represents the *Dushti* and *Dosha* of *Annavaha Srotas*, with the obvious implication that, in either case, there is the manifestation of *Amadosa and Sama*.

DRUG OF CHOICE-*Kutaja, Ballataka, Takra, Shunti, Musta, Chitraka, Kaidarya*
FORMULATIONS- *Kaidaryadi Kashaya, Kalasakadi Kashaya, Mustakaranjadi Kashaya, Hingu Vachadi Choornam, Chitrakadi Vati, Agnitundi Vati, Takrarishtam, Mustarishtam, Madhukasava*.

MANAGEMENT OF MALABSORPTION

Replacement of nutrients, electrolytes and fluid may be necessary.

Pancreatic enzymes are supplemented orally in pancreatic insufficiency.

Dietary modification is important in some conditions.

Gluten-free diet in celiac disease

Vitamin D and **Calcium** supplements.

Table 3: Ayurvedic management for Malabsorption.

AYURVEDIC MANAGEMENT FOR MALABSORPTION	
Inadequate digestion	<i>Langhana, Deepana and Pachana</i> drugs. Eg- <i>Panchakola Choorna, Pippalyadi choorna</i>
Inadequate absorption	<i>Medicated ghee</i> Eg- <i>Tiktaka ghrita, Panchamula ghrita</i>
Lymphatic obstruction	<i>Takra, Madhya, Asava, Arishta, Kshara Kalpana</i> Eg- <i>Takrarishta, Madhvasava, Duralabhadya ksara</i> etc.

Gluten and lactose-free diets are recommended in malabsorption as per modern science, likewise, rice and buttermilk are preferred according to Ayurveda.

PATHYA AHARA- *Amla* and *Lavana rasa pradhana dravya*.

Trikatu and *Sarkara*- to enhance metabolism.

Yavagu - to maintain intestinal mucosal membrane and enhance absorption.

Yusha- to increase gastric secretions.

Mamsa rasa- for proper nourishment.

Paana- takra, arishta

PATHYA VIHARA- *Nidra, Vishrama*, Activities making mind happy.

APATHYA AHARA: *Atishita Jala, Dushta Jala, Guru, Snigdha, Drava, Atiruksha, & Saraka substances, Viruddha Bhojana, Rasona, Patra Shaka* etc.

APATHYA VIHARA: *Vega vidharana, Chinta, Shoka, Bhaya, Krodha*, etc.

CONCLUSION

The health and diseased state of the body is dependent on *Agni*. The disorders related to the digestion of food and its absorption is becoming more common due to our faulty food habits, which are covered under *Grahani dosha*. Hence in such instances, prime importance should be given to restoring *Agni* by adopting the *Deepana, Pachana* and *Shodhana* line of treatment, thereby, one can prevent the consequences of *Agni dosha* and achieve *Bala, Varna, Swasthya* and *Ayu*.

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