

AN AYURVEDIC REVIEW OF GRAHANI W.S.R. TO MALABSORPTION

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ABSTRACT

Grahani derived from *Dhatu "graha"* which suggests "to catch" "to hold" or "to get". The word *Grahani* in *ayurveda* is related to *Agni* (digestive fire) which helps in the metabolism and digestion of food. Ayurvedic texts describe the ingestion, digestion, absorption and association of *Aahaar* by *Grahani*. Normally it retains the undigested food and releases the digested stuff through the side of its *Grahani* which is the site of *Agni*, is so called because of its power to restrain the downward movement of undigested food and retains food till it is fully digested. Functionally weak *Agni* i.e. *Mandagni* [weak digestive fire] causes impaired digestion of ingested food, which lead to *Amadosha* and it has vital importance in the pathogenesis of *Grahani Roga*. Any disturbance in *Agni* leads to an improper digestion of food. The main symptoms of Mal absorption are diarrhoea, loss of appetite, anorexia, and emaciation. The principle of diet for all types of *Grahani* is boost the *Agni* and decrease the *Ama* with the help of *Ahara Dravyas*, which included mainly *Kashaya*, *Madhura* and *Katu* in *Rasa* [taste]; *Laghu*, *Ruksha*, *Grahee*, *Deepana* and *Pachana* in *Guna* [property]; *Ushna* in *Veerya* [potency] and *Katu* or *Madhura* in *Vipaka* [effects on digestion]. The diet regime suggested by *Ayurveda* helps in stimulation of *Agni*, which helps the digestion of food of appropriate quality, taken in required quantity and in right time for cure of *Grahani Dosha* or Malabsorption.^[5] In *Ayurveda* *Mandagni* [weak digestive fire] is considered as the root cause for manifestation of many diseases. Among them, *Grahani Roga* is one of the prime disease of gastro-intestinal tract and seen often in day to day practice. *Grahani* and *Agni* are depends on each other. *Mandagni* leads to *Ama Dosha* [accumulated toxins] which may result in *Grahani Roga* over time. Thus we can resume the bowel habit to normal, improve the overall nutritional status of patients and can prevent or reduce the complications of Malabsorption with the help of *Ayurvedic* principles

KEYWORDS: *Agni*, *Grahani*, *Weak Digestive Fire*, *Mal absorption*.

INTRODUCTION

Ayurveda is one of the ancient holistic healing systems in the world. It is supported the assumption that health and well-being depend upon a fragile balance between mind, body and spirit and it's only going to happen when proper diet, lifestyle is followed, but in present era faulty eating habits, sedentary lifestyle leads to *Agni's* [digestive fire] malfunctioning, *Grahani* (duodenum and the upper part of small intestine), where *Agni* [digestive fire] is located (enzymes responsible for digestion and metabolism), is so called because of its power to restrain (the downward movement) of undigested food and retains food till it is fully digested. The term *Grahani dosha* [vitiated factors] implies the malfunctioning of *Agni* [digestive fire]. There is no distinction between the *Ashraya* (substratum i.e. *Grahani*) and *Ashrayi* (the

substance i.e. *Agni*). *Grahani* is explained as an *Agni Adhishthan* [location] by most of the *Acharyas*.^[1]

According to classical texts of *Ayurveda* it mentioned that by following the daily routine concepts we can maintain good health, longevity, strength, intellect, good voice and complexion. *Agni* is the important agent in the process of *Ahara paka* (digestive juice), *Grahani* is an *Ayurveda* term related to the seat of *Agni* (digestive fire), which help in the metabolism and digestion of food. In *Ayurveda* *Mandagni* (weak digestive fire) is considered as the root cause for manifestation of many diseases. Among them, *Grahani roga* is one of the most notable disease of gastro-intestinal tract and seen often in day to day practice. *Mandagni* (weak digestive fire) leads to *Ama Dosha* [accumulated toxins] which may result in *Grahani Roga* over time. *Acharya Charaka* says that

when improper digested and improper undigested bio substances moves downward in gastrointestinal tract it produces a disorder known as *Grahani roga* due to *Durbala* (weak) *Agni Grahani* and *Agni* are interdependent, functionally weak *Agni* i.e., *Durbala Agni*, causes improper digestion of ingested food, which leads to *Ama Dosha* [accumulated toxins].^[2] This *Ama Dosha* is a root cause of most of the diseases. It has vital importance in the pathogenesis of *Grahani Roga*. *Grahani* is considered under the eight major diseases (*Ashtamahagada*) by Acharya *Vagbhata*.^[3] In the era of fast food, diet and diet timings has been changed with sedentary lifestyle. Along with change in diet and lifestyle, one is all the time under tremendous mental stress. All these causes disturbance to the digestive system; which result into many diseases, amongst which digestion and absorption disorders constitute an important group.

Ahara (food) is the most important factor for sustenance of life. It is described as vital pillar among the three pillars of life (*Trayopstambha*) i.e. *Ahara*, *Nidra*, *Brahmacharya*. *HitKari /Pathya Ahara* (healthy diet regimen) which is the most crucial culprit responsible for Mal absorption.^[4] It includes the symptoms mainly diarrhoea, loss of appetite, anorexia, emaciation. Digestion and absorption of nutrients is a complex, highly coordinated and extremely efficient process; normally, less than 5 % of ingested carbohydrates, fats and protein is excreted in the faeces. Diarrhoea and weight loss in patient with a normal diet should always lead to the chances of Mal absorption. In modern science, no disease or condition is exactly similar to *Grahani roga*, but symptoms are found very common in various disease conditions, on which the concept of *Grahani roga* is based.

AIM AND OBJECTIVE

To study *Grahani* and Mal absorption in *Ayurvedic* and Modern perspective

MATERIALS AND METHODS

Ayurvedic Review

The term *Grahani* denotes for both to the name of disease and organ that is involved in pathogenesis. For better understanding of *Grahani Roga*, here firstly we should learn and understand the concept of *Agni* and *Ama* [accumulated toxins].

Concept of Agni

The term *Agni* (digestive fire) in *Ayurveda* has a significant role to maintain body homeostasis, body functioning, metabolism of body.

Agni is described in *Ayurveda* as having many intangible aspects that show the importance of *Agni*. As *Ayu* (longevity) which means it increases the human's life span, if *Agni* (digestive fire) is working properly, *Varna* (complexion) which means it maintains the colour

complexion of the body, *Balam* (strength) which means *Agni* maintains the body's strength. *Swasthyam* (health) which means it maintains the human's physical, *Ojas* (tissue essence) maintains the body's immunity, *Agnayah* (bio fires) maintains the body's digestive fires, and *Prana* (life) maintains the human being's stable life. When the body's *Agni* (digestive fire) is extinguished, the body is seems to be dead, and *Sharira* (human body) is considered dead. As long as *Agn* (digestive fire) *i* in the body is in a healthy state, a person can live a long life free of illness or sickness. As a result, *Agni* (digestive fire) is the root cause of all

Etymology

Agni is defined as "*Nayate Prinamayattiti*" in *Vachaspathyam*, meaning ("which introduces changes in an organism or a substance") implying that it is a significant factor in the transformation of eaten *Ahara Vihara* (dietary regimen and daily routine) and other substances.

The functions of *Agni* (digestive fire) are recognized to *Pitta Dosha*, since the term *Pitta* resultant from "*Tapa Santape* is similar to *Agni*".^[5]

Agni in Ayurveda

-According to *Charaka*, there are 13 types of *Agnis* (digestive fire). These are 13 types of *Agnis* (digestive fire). These are -*AntarAgni-1*, *BhutAgni-5*, and *DhatvAgni-7*.

Hetus (Etiological factors) of Grahani Roga

One who eats covetously leaving aside all the rules acquires the disorder due to morbidity in *Grahani* soon. Vitiated

Agni (digestive fire) is the main factor for the causation of the disease. The main causes of *Grahani Roga* are-

1. Vitiating of *Agni* directly by indulging in various etiological factor
2. When *Mandagni* (weak digestive fire) already stick with such as after diarrhoea and person still indulge in '*Ahit- Sevan*'. (unhealthy contaminated food).

The etiological factors which are stated to be accountable for *Agni Dushti* (harmful impact on digestive fire) can be divided into two groups i.e. *Samanya* (general) and *Vishishta* (specific) *Hetus*

Samanya Hetus**Table no 1: Aharaj Nidan (Causes Due To Faulty Diet Regimen).**

<i>Abhojana</i> (consumption of less food than required amount)	<i>Samashana</i> (eating of exact equal portions of unsuitable food)
<i>Vishamashana</i> (mixed diet of variable quantity of food)	<i>Viruddhashana</i> (eating of mixed food of opposite properties)
<i>Atibhojana</i> (eating very large amount than required)	<i>Asatmya Bhojana</i> (food that is not suitable for human physiology)
<i>Atiguru Bhojana</i> (eating of very oily, fatty food)	<i>Sheeta Bhojana</i> (eating of food which below par temperature)
<i>Atiruksha Bhojana</i> (eating very dry food)	<i>Sandushta Bhojana</i> (eating of contaminated food)

1- Viruddha or Incompatibility of-

1. *Desha* (region eg. Tropical)
2. *Kala* (time)
3. *Ritu* (season)

2- Suppression of natural urges (Vega Vidharana)

Acharya Sushruta also described causes of *Ajeernaas*. (indigestion)

4. *Atyambupana* (excessive drinking of water)
5. *Vishamashana* (mixed diet of variable quantity of food)
6. *Swapna Viparyaya* (*Divaswapa and Ratri Jagarana*) /disturbing the biological clock of body
7. *Manasika Hetus* (mental causes)
8. *Viz Irsha, Bhaya, Krodha, Lubdhata, Shoka, Dainya, etc./* fear,anger,greed,poverty,depression etc)

Vishesh Hetu

1. *Sushruta* described *Grahani Roga* in chapter *Atisara Pratisedh*. He states that if a person who has *Mandagni* (weak digestion) or a person who has just improved from *Atisara* (diarrhea) takes indiscriminate food may suffer from *Grahani Roga*.
2. *Acharya Charaka*, while telling treatment of

Amatisara (dysentery) stated that if *Sangrahi* medicine is given during *Ama Avastha* (accumulative state of toxins) of *Atisara* (diarrhea) may cause *Grahani Roga*.

3. *Arsha* (hemorrhoids) and *Atisara* (diarrhea) may directly produce *Grahani Roga* as these are *Anyonya Nidana Bhuta Vikara*. (secondary causes) In the *Pittaja Jwara* where *Atisara* (diarrhea) is a major feature may produce *Grahani Roga*.^[6]

Purvarupa

In the above premonitory symptoms, *Trishna* (thirst) is specific *Purva Rupa* (signs) of *Vataj* and *Pittaj Grahani Roga*. In the earlier it is due to excessive roughness and in the latter due to extreme loss of fluids. Heaviness in the body (*guruta*) and lethargy (*klama*) are the specific *Purva Rupa/signs* of *Kaphaj Grahani Roga*.

- 1) *Trishna* (thirst)
- 2) *Alasya* (sleepiness)
- 3) *Balakshaya* (generalized weakness)
- 4) *Annavidaha* (burning sensation in abdomen)
- 5) *Annasyachirpaka* (delayed digestion)
- 6) *Kayasya Gauravam* (heaviness in body)
- 7) *Klama* (lethargy)

Table No. 2: Rupa: Showing general sign and symptoms of Grahani Roga in various Ayurvedic Samhitas^[7]

S.N.	Types of <i>Grahani Roga</i>	CS	SS	AS	AH
1.	<i>Ati-Sratmal Pravritti</i> (irregular bowel)	+		+	+
2.	<i>Koshta Badhta</i> (constipation)	+	+	+	+
3.	<i>Drava mal Pravritti</i> (watery stool)	+	+	+	+
4.	<i>Trishna</i> (morbid thirst)	+	+		
5.	<i>Arochak</i> (anorexia)	+	+		
6.	<i>Asya Vairasya</i> (distaste in mouth)	+	+		
7.	<i>Praseka</i> (excessive salivation)	+	+		
8.	<i>Tamkanvit</i> (asthma)	+	+	+	+
9.	<i>Soon Pad</i> (leg pain)	+	+	+	+

Samprapti

The basic pathology of *Grahani* is *Agni Dushti*; disorder of *Agni* may be *Mandagni* (weak digestion), *Tikshnagni* (fast digestion) and *Vishmagni* (variable digestion). Among these *Mandagni* (weak digestion) is mainly accountable for causing *Grahani Roga*. Regarding the pathogenesis of *Grahani*, *Charaka* has described that *Agni* become vitiated due to *Nidana*

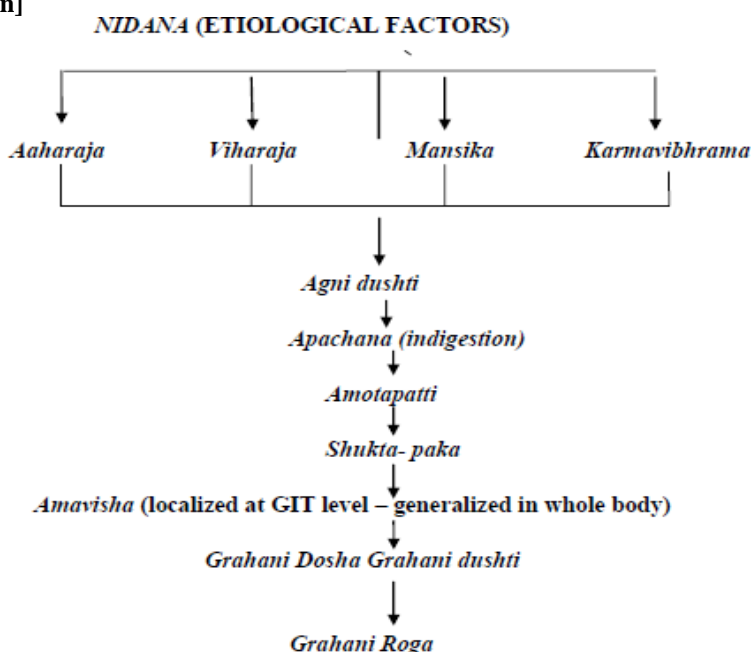
(causative factors) and fails to digest even the light food and this undigested food gets fermented leading to the onset of toxic states^[8]

Samprapti Ghataka of Grahani Roga

Samprapti Ghataka (factors of pathophysiology) of *Grahani Roga* can be summarized under the following headings:

- **Nidana** : Aharaja, Viharaja, Purishavaha Srotas, RasavahaSrotas
Manasika Karana,
- **Dosha** : Vayu :Samana, Apana, **Strotodusti** : Sanga, Vimarga-Gamana,
Vyana; Pitta–Pachaka; Kapha –Kledaka
Atipravritti
- **Dushya** : Ahara Rasa, Rasa Dhatu **Udbhavasthana** : Ama-Pakvashaya
- **Agni** : Jatharagnimandya **Roga Marga** : Abhyantara
- **Ama** : Jatharajanya **Vyadhiswabhava**: Chirakari
- **Srotas** : AnnavahaSrotas, **Adhithana** : Grahani

[Schematic Presentation]

**Mal Absorption**

The symptoms of Malabsorption are in nature uneven in severity. A few patients have apparently normal bowel habit but diarrhoea is usual and may be watery and voluminous and is bulky, greasy, frothy, pale, and oddly offensive. It can be guessed on the basis of nature of stool as - Bulky, pale and offensive stools which float in the toilet (steatorrhea) signify fat Malabsorption. Stool is bulky in Malabsorption of carbohydrate and water, floating in water in either high fat content or high gas, and explosive diarrhoea is classical of carbohydrate Malabsorption. Abdominal distention, borborygmi, cramps, weight loss and undigested food in stool may be present. Some patients complain only malaise and lethargy. These patients don't have rectal symptoms, mucus or blood in stool. Sometimes there is pain in periumbilical region. Pathophysiological basis of diarrhoea in Malabsorption is due to decreased absorptive surface, secretory activity of bile acids and osmotic activity of short chain fatty acid. Dull, vague poorly restricted pain is due to excess flatulence. When flatulence is none foul it is carbohydrate Malabsorption and when foul it is protein.^[9-10]

Etiology and Pathogenesis**1. Intraluminal Mal Absorption**

Occurs when deficiency of bile or pancreatic enzymes

results in insufficient solubilisation and hydrolysis of nutrients. As a result fat and protein Malabsorption occurs. This may also occur in the presence of small bowel bacterial overgrowth.

2. Mucosal Mal absorption

Results from small bowel resection or conditions which damage the small intestinal epithelium, thereby diminishing the surface area for absorption and depleting brush border enzyme activity.

Post mucosal Mal absorption

lymphatic barrier prevents the uptake and transport of absorbed lipids. Into lymphatic vessels, increased pressure in these vessels results in leakage into the intestinal lumen, leading to protein-losing enteropathy.^[11]

DISCUSSION

Mandagni (weak digestive fire) is root cause of all diseases, according to *Roga sarvepimandagni*. *Agni dushti* (vitiating of agni) is a prime cause of *Grahani Roga*. *Ashraya-ashrita bhava* (substance-location phenomenon) is the interaction between *Grahani* and *Agni*. *Grahani* is the primary place of *agni* (digestive fire) and the occurrence of the disease *grahani roga*.

The prime site of Agni and the site of incidence of the disease *Grahani Dosh* is organ *Grahani*. This ensues with symptomatology like *Atishruta* and *vibaddha* (abdominal fullness) *mala pravritt*, *Jwar* (fever), *Udgara* (burp), *Arochaka* (anorexia) etc. As far as the etio pathology of the disease is concerned, due to various unhealthy causes vitiation of *Pitta(Agni)* situated between *Amashaya* (stomach) and *Pakwashaya* (intestine) is responsible for the appearance of the symptoms.

In *Grahani* the entire food material usually remains in the state of *Vidagdha* (i.e. part of it gets digested, the other part remaining undigested), in involvement with *Trishna* (morbid thirst), *Arochaka* (anorexia), *Vairasya* (distaste in mouth), *Praseka* (excessive salivation) and *Tamaka* (asthma), the affected person voids stool in large quantity either in solid or liquid form.

Sampraptibhanga

The ancient intellectual used the principle of diet application for all types of *Grahani*, boost the *Agni* (digestive fire) and to diminish the *Ama* (toxins), meaning the *Deepana Pachana* (diet for easy digestion) diet. To get an enhancing effect of *Agni* (digestive fire) and dropping the *Ama* (toxins), they prescribed *Ahara Dravyas* (food items), which included mainly *Kashaya*, *Madhura* (sweet) and *Katu* in *Rasa*; *Laghu* (light), *Ruksha* (dry), *Grahee*, *Deepana* and *Pachana* in *Guna* (properties); *Ushna* in *Veerya* (potency) and *Katu* or *Madhura* in *Vipaka*. [effects on digestion]

As modern medical science states, Intraluminal Malabsorption occurs due to bile or pancreatic enzymes insufficiency, by considering *Agni* (digestive fire) as enzymes, *Agni* enhancing diet can increase these enzymes and disrupt the Malabsorption. In case of Mucosal Malabsorption which occurs due to depleting brush border enzyme activity, again *Agni* enhancing diet can regain the implementation of enzymes and can stop its pathogenesis. And by boosting the *Agni* which leads to reduction in *Strotas* (minute channels) obstructing *Amadosha* (accumulated toxin), the obstructive pathology in lymphatic vessels occurring in Post Mucosal Malabsorption can be corrected.

CONCLUSION

Due to our deprived eating habits, *grahani* roga is related to food digestion and absorption. They are treated in a more well-known fashion, taking into account the *ayurvedic* idea of *agni* (digestive fire) and administering *Deepana* and *Pachana* (diet for easy digestion) drugs.

It is clear that, if a person takes food without the proper procedure, then he quickly succumbs to diseases like Malabsorption caused by the vitiation of *Grahani* because of his uncontrolled lifestyle. It means proper diet has a key role in management of *Grahani* or Malabsorption. The 28 *Ahara Dravyas* of assorted classes studied in this research can be suggested for

Grahani patients. The positive approach need to be taken for prevention of *Grahani* with the planning of proper diet.

We can carry on the bowel habit to normal, improve the overall nutritional status of patients and can avoid or reduce the complications of Malabsorption with the help of *Ayurvedic* principles of diet, because intake of wholesome food in appropriate quantity after the digestion of the previous meal helps a person to enjoy good health for a long time. With proper types of fuel in the form of varieties of foods and drinks, which are wholesome, the condition of *Jatharagni* should be correctly and carefully maintained, because the life and the strength of an individual are dependent upon it.

After a bird-eye vision of present-day practice of diet and lifestyle including the method of food planning, raw ingredients, food combinations, and food timings, holistic *Ayurvedic* ideology of diet, *Pathyapathya* (dietary regimen), etc., is certainly in a state where it is very indispensable to focus, if the complete health is to be maintained. The modern science has given prominence on Gluten free diet for the treatment of Malabsorption. The diet regime suggested by *Ayurveda* helps in stimulation of *Agni* (digestive fire), which supports the digestion of food of appropriate quality, taken in required quantity and in right time for cure of *Grahani Dosh*

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