UNDERSTANDING GRAHANI THROUGH GUT AND BRAIN RELATION & IT’S MANAGEMENT “GRAHANI AND BRAIN”

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ABSTRACT

Irritable Bowel Syndrome (IBS) is one of several highly prevalent, multi-symptom gastrointestinal motility disorders that have a wide clinical spectrum and is one of the most common conditions encountered in clinical practice but one of the least well understood. Grahani is an organ situated between āmāshaya (stomach) and pakvāshaya (colon) which is the main seat of digestive glands comprising of digestive juices and where proper digestion of the food takes place. It is also responsible for retention of food for sufficient time for proper digestion and assimilation of the nutrient from the digested food. Dysfunction of Grahani is termed as Grahani Dosha. This condition may lead to formation of Ama which is the cause of many other diseases[1] (Charaka Chikitsa 15/45-49). It has rightly been said by Vagbhata that all ailments in the body, specially diseases of alimentary tract arise due to the malformation of AGNI. IBS is also one among such diseases which occurs due to the mandagni. And psychological factors like krodha, shoka, bhaya, kama etc. which results in Agnidushti leading to Grahani dosha[2] (c,chi 15/71). IBS has strong Psycho-somatic base. No cure has been found out to the disease. But only symptomatic treatment & assurance is given to the patient by the modern medical science. As world is looking forward for Ayurveda for safe treatment modalities, it is essential to find out the effective therapeutic procedures from our science. In this paper an effort will be made to explore the utility of drugs that relieves stress (manasika bhavas) in grahami roga.

KEYWORDS: Grahani, Grahani Roga, Manasika Bhavas.
INTRODUCTION
In the era of fast food, there is change or irregularity in diet and diet timings and also sedentary lifestyle. In addition to change in diet and lifestyle, one is always under tremendous mental stress. All these causes disturbance to the digestive system, which results into many diseases, amongst which digestion and absorption disorders constitute an important group.

Grahani is a seat of agni (Digestive fire). It retains the food till the food is fully digested and then passes it into pakwashaya (intestine). Functionally weak Agni i.e mandagni causes improper digestion of ingested food & leads to Grahani roga. Mandagni is the result of psychological factors like, krodha, shoka, bhaya etc. Grahani is a disease of great clinical relevance in modern era because of its direct link with the improper food habits and stressful lifestyle of the present time. Grahani roga's pathogenesis revolves around Agnidosha, the seat of which is the structure described as Grahani.

Irritable bowel syndrome (IBS) is defined as ‘a functional bowel disorder in which abdominal pain is associated with defecation or a change in bowel habit with features of disordered defecation and distension’.

Three main interrelated factors are distinguished in the pathophysiology of IBS:
(i) altered gut reactivity (motility and secretion) resulting in symptoms of diarrhea and/or constipation.
(ii) gut hypersensitivity.
(iii) dysregulation of the brain–gut axis.[3]

Understanding Brain-Gut axis
Alterations of gastrointestinal (GI) motor function are part of the visceral responses to stress. Inhibition of gastric emptying and stimulation of colonic motor function are the commonly encountered patterns induced by various stressors.

Acute stress induces differential motor effects in the upper and lower GI tract. Delayed gastric emptying is commonly induced by various acute stressors. In humanbeing anger, fear, labyrinthine stimulation, painful stimuli, preoperative anxiety, or intense exercise results in a slowing of gastric emptying.[4] Stress is able to modify visceral sensitivity as well as GI motility, permeability, intestinal microbiota and immunity of the GI tract, all mechanisms that are involved in the pathophysiology of IBS. In addition, stress is able to modulate the
hypothalamic pituitary adrenal (HPA) axis and the autonomic nervous system (ANS) which is the link between the gut and the CNS and an imbalance of the ANS is observed in IBS patients.\textsuperscript{[5]}

**How Stress triggers IBS**

[Diagram]

Painful stimuli, fear, anxiety, anger or a stressful interview enhances colonic motor activity. This biopsychosocial disorder involves dysregulation of the nervous system, altered intestinal motility and increased visceral sensitivity. All of these result from dysregulation of the bidirectional communication between the gut with its, enteric nervous system and the brain (the brain-gut axis), modulated by various psychosocial and environmental factors (e.g. infection, inflammation) brain-gut interactions are increasingly recognized as underlying pathomechanisms of functional gastrointestinal disorders.

Bi-directional communication between the central nervous system (CNS) and the enteric nervous system (ENS) occurs both in healthy and diseased.

Each aspect of digestive activity is under the regulatory influence of neurons, among which the ENS plays the most important role.\textsuperscript{[6,7]} The ENS, also called the ‘little brain’ of the gut, functions independently of the CNS.\textsuperscript{[8]} It controls GI motility and secretion and is involved in visceral sensation. The ENS has been shown to exert an important role in the regulation of several intestinal mucosal functions, including mucosal blood flow, regulation of epithelial permeability, organization and cell proliferation.\textsuperscript{[9]} All of these functions contribute to the maintenance of the intestinal barrier.\textsuperscript{[9]}

Visceral hypersensitivity is a key mechanism underlying abdominal pain, one of the main symptoms of IBS. Visceral hypersensitivity is thought to be determined by central and
peripheral mechanisms, as it may result from altered transmission within the gut wall and the brain.

The CNS is also essential in the perception of events occurring within the gut. Alteration at any level can lead to altered sensation, dysmotility, or psychological distress.

DISCUSSION

Irritable bowel syndrome has strong psycho-somatic base. So the type of drug or therapy should be recommended in a way that it can pacify vitiated manasik bhavas (psychic factors) acting as a stressor to correct the deranged psychosomatic set up, resulting in regulating bowel mobility. anti-anxiety drugs like sarpagandha, jatamansi, bramhi, vacha, tagara. the medhya (brain tonics / psychic rejuvenation) category drugs are used to balance the insomniac disturbances. The nerverine tonics like asvagandha and bala are used to strengthen the nervous system choorna of single and multiple combinations can be used, Like saraswat choorna, tagaradi choorna and asvagandhadi choorna, and single drug choorna like vacha choorna, jatamansi choorna. along with these medicines the rasayana preparations like brahmi rasayana, ghrita (ghee based medicines) like maha paishachik ghrita, panchagavya ghrita, puran ghrita and brahmi ghrita can be given to the patient. The fermentation preparations like saraswatarishta, balarishta can be used. The anti-anxiety drugs from allopathic aspect in general are sedatives and antidepressants. The most of these drugs when taken for a continuous therapy creates dependency and as well as withdrawal symptoms. The plus point observed in Ayurvedic management is absence of any hazardous effect, which is really a great benefit to the patient and is of vital importance in view of the global acceptance of Ayurveda.

CONCLUSION

Brain-gut interactions are increasingly recognized as underlying pathomechanisms of functional gastrointestinal disorders. Bi-directional communication between the central nervous system (CNS) and the enteric nervous system (ENS) occurs both in healthy and diseased. Various CNS- and gut-directed stressors stimulate the brain-gut axis. Processes modulating responsiveness to stressors along the brain-gut axis involve neural pathways, the immunological and endocrinological mechanisms. Disturbances at every level of neural control of the gastrointestinal tract can affect modulation of gastrointestinal motility, secretion, immune functions as well as perception and emotional response to visceral events. ENS function, central processing, and autonomic regulation play an important role in the
brain-gut dialogue. Stress and emotions may trigger neuroimmune and neuroendocrine reactions via the brain-gut axis.

REFERENCES