

**“Role of *Piccha Basti* in the management of celiac disease  
w. s. r. to *Grahani*: a review.”**

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**Abstract:**

Diseases emanating from GIT form a considerable part of practice in India and abroad. Starting from ancient time to the modern era, *Grahani Dosha* has. *Grahani* remained a fore runner but has also behaved like the fountain head of many GIT ailments *Dosha* is associated with digestive problem and prevalence of *Grahani* increase in current scenario due to the bad dietary habits, irregular lifestyle, stress and environmental condition. As per *Ayurveda*, Agni is maintained properly then the individual will be free from many diseases. If it gets vitiated then individual becomes host for ample number of disease, among them *Grahani* is the most prevalent disease in these days. The cardinal features of *Grahani* explained in the classical text book of *Ayurveda*, have at most similarities with clinical feature of celiac disease explained in western medicine. Celiac disease is also termed as celiac sprue or gluten sensitive *enteropathy*. It is an autoimmune digestive disorder.

People with CD have an allergy to foods containing gluten such as wheat, barley, rye, bread, pastries, pizzas, biscuits etc. CD is seen more in the countries with high consumption of wheat product that contain gluten. CD is suspected to be more prevalent in the north Indian population where wheat is primarily grown and forms the staple cereal. According to *Ayurveda*, CD can be related with *annavaha srotas dushti*. The sign and symptom of celiac disease can be correlated with *Grahani roga*. *Agnimandya* (low digestive fire) result in formation of Aama and the disease manifests. *Piccha basti* is indicated in *Jeerna Grahani* and *Jeerna atisara* avastha by *charaka* and *vagbhata*. *Piccha basti* reduces inflammation due to its *grahi*, *Deepana dravya* and *picchila guna*. it also improve the function of *apana vata*. A use of *piccha basti*, *Deepana*, *pachana dravya*, and along with the dietary modifications gives maximum relief in Celiac disease.

**KEYWORDS:**

*Piccha basti*, Celiac Disease, *Grahani*, Gluten sensitivity.

**Introduction:**

An *Ayurveda* is the traditional system of medicine seeks to treat and integrate body, mind and spirit using a comprehensive holistic approach especially by emphasising diet, herbal remedies, exercise, meditation, breathing and physical therapy. Celiac disease is an autoimmune digestive disorder. The damage to the lining of the small intestine leads to the Mal-absorption of mineral and nutrient. The destruction of the inner lining of the small intestine in Celiac disease is caused by an immunological reaction to Gluten. Gluten is a family of proteins present in wheat, barley, rye etc.

CD is a global disease and the global *sero* prevalence and prevalence of CD are 1.4% and 0.7% respectively. The prevalence of CD varies with sex, age and geographic location. The prevalence of CD has increased over time from 0.6% in 1991 to 2000 to 0.8% between 2001 and 2016. <sup>1</sup>Earlier the cases of celiac disease were very low in India compared to western countries but in recent years, it has been doubling every 20 years. It is more prevalent in north India where wheat is the staple food compared to the South India. Compared to the West, CD in India is characterized by a later onset of disease. The mean age of onset of symptoms is 2.4 to 3 years and age at diagnosis is 6.3 to 8.6 (range 2.5 to 14) years, indicating a delay in diagnosis by 3.4 to 5.9 years.<sup>16, 17, 18, 20</sup> On the other hand, children with CD in the West classically present between 9-18 months of age and majority are

diagnosed by two years of age.<sup>41, 42</sup> Prolonged breast-feeding and delayed introduction of gluten in the diet could be responsible for later onset of CD in Indian children. Delayed diagnosis could be due to lack of CD awareness and presence of recurrent gastrointestinal infections causing diarrhoea, protein calorie malnutrition and nutritional anaemia. In our experience, most children with CD in India receive multiple courses of anti-microbial agents and even anti-tubercular treatment before reaching tertiary care centres. Lack of awareness amongst medical doctors along with lack of wide availability of paediatric endoscopy and reliable celiac serology contribute to delay in diagnosis.<sup>2</sup>

The prevalence of celiac disease has jumped four folds in India since 1960s and now eighty lakh people are affected, according to experts at the International Symposium on Wheat Related Disorders (ISWD). The conference, hosted by Celiac Society of India (CSI) on January 12, 2019, discussed celiac and other wheat-related disorders. Celiac, which the experts say 90 per cent Indians are unaware of, has affected those with a specific gene type called DQA1 or B1. This gene in turn expresses the genes DQ2 or DQ8, which is prone to celiac disease. The current prevalence of disorders related to wheat could be attributed to the hybrid varieties of wheat which have increased levels of gluten. The experts also pointed out other toxins, including preservatives and chemicals present in food that could trigger wheat related disorders.<sup>3</sup>

As per *Ayurveda*, Celiac disease is the result of the wrong decision by the immune cells. The immune cells are

observed to be behaving abnormally to gluten. Although, all human beings do not have this hypersensitivity and it means gluten is not creating this disease. *Ayurvedic* treatment for Celiac disease is aimed at correcting the immune system. CD is the problem involving hypersensitivity of immune cell to Gluten. The cardinal features of *Grahani* explained in the classical text books of *Ayurveda* have at most similarities with the clinical features of Celiac disease. *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*, causes improper digestion of ingested food, which lead to *Ama Dosha* and it has pivotal importance in the pathogenesis of *Grahani Roga*. The *Ayurveda* correct the digestive disturbance and improve the absorption of the nutrients from the food. The nutrition status of the body is severely affected because of improper absorption of micro nutrients. Another important aspect of *Ayurveda* is proper detoxification from the body. This is the only way to get rid of the disease and it can only keep us in the best of our health.

#### **Aim and objective:**

To study the role of *piccha basti* in the management of celiac disease (gluten sensitivity) w. s. r. to *Grahani*.

#### **Method and Material:**

Textual references are from *ayurvedic* classical text and various journals, research articles and websites are referred.

#### **Etiological Factors of *Grahani*:** <sup>4</sup>

- *Abhojanat*, *Ajeernabhojanat*,  
*Attibhojanaat*, *Visamasanat*,

*Asatmya Guru*, *Ruksha* and *Sandusta* Bhojanat etc.

- *Vyadhikarshanat* and *Vegavidharana*
- Stress, anxiety and grief
- In disciplinary life style and bad food habits
- Unhygienic environmental condition
- Nutritional insufficiency
- Contagious predominance
- Improper functioning of digestive fire
- Diseased condition which weakened Agni
- Virudha-ahara
- Avoidance of concept of *Desha* and *kala* during consumption of food stuffs
- Excessive use of antibiotics.

Maximum patients were from middle age group; in this age group, people usually do *Adhyashana*, *Vishamashana*, *Ratrijagaranam*, and *Diwasvapana*, which leads to *TriDosha Dushti* – mainly *Samana Vayu*, *Pachaka Pitta*, and *Kledaka Kapha*, and also tension or anxiety is much seen in this age group, which leads to *Agni Dushti* and finally, it leads to *Amavstha* of *Grahani Roga*. Maximum patients were doing either *Pramitashana* or *Vishamashana*, both lead to *Ama* formation. Finally, it results into occurrence of disease. Maximum patients were having *Mridu Koshtha*, which indicates the patients of *Grahani* are more prone to recurrent diarrhea. In the present study, majority of patients were suffering from anxiety/tension, emotional stress, and depression leading to vitiation of Agni and it results into *Amavastha* of *Grahani Roga*. Maximum patients were having *Mandagni*,

*Madhyama Ruchi, Avara Abhyavaharana Shakti and Avara Jarana Shakti*; this signifies the importance of Agni i.e., *Mandagni*, in the pathogenesis of *Grahani Roga*. *Mandagni* results into vitiation of *Dosha*, which leads to ama formation. It plays a vital role in *Samprapti* of *Grahani Roga*.

### Symptoms of *Grahani*:

The cardinal features of *TriDoshaj Grahani* explained in the classical text books of *Ayurveda* have at most similarities with the clinical features of Celiac disease.

According to *Acharaya* the predominant symptoms of disease are;

- पार्श्वोरुक्षःण ग्रीवारुजो, विसुचिका<sup>5</sup>
- काश्य, दोबल्य, मनसःसदन<sup>6</sup>
- जीर्णे जीर्यति चाध्मान<sup>7</sup>
- चिरादुःखं द्रवं शुष्कं तन्वामं शब्दफेनवत<sup>8</sup>
- पुत्याम्लोद्गार<sup>9</sup>
- हल्लास, छ्दी, अरोचक<sup>10</sup>
- सदनं स्त्रीष्वहर्षणम<sup>11</sup>

### Symptoms of Celiac disease:<sup>12</sup>

Digestive symptoms are more common in infants and children. Here are the most common symptoms found in children:

- abdominal bloating and pain
- chronic diarrhea
- vomiting
- constipation
- pale,
- foul-smelling,
- fatty stool
- iron-deficiency
- anemia
- weight loss

- fatigue
- irritability and behavioral issues
- dental enamel defects of the permanent teeth
- delayed growth and puberty short stature
- failure to thrive
- Attention Deficit Hyperactivity Disorder (ADHD)

Adults are less likely to have digestive symptoms, with only one-third experiencing diarrhea. Adults are more likely to have:

- unexplained iron-deficiency anemia
- fatigue
- bone or joint pain
- arthritis
- osteoporosis or *osteopenia* (bone loss)
- liver and biliary tract disorders (*transaminitis*, fatty liver, primary sclerosing *cholangitis*, etc.)
- depression or anxiety peripheral neuropathy (tingling, numbness or pain in the hands and feet)
- seizures or migraines
- missed menstrual periods
- infertility or recurrent miscarriage
- canker sores inside the mouth
- dermatitis *herpetiformis* (itchy skin rash)

present the gold standard of diagnosing CD is the modified European Society of *Pediatric Gastroenterology, Hepatology and Nutrition* (ESPGHAN) criteria. According to these criteria, only intestinal biopsy changes and clinical response to GFD are sufficient to make the diagnosis of CD. In India, we would always suggest doing CD serology at diagnosis. In a given clinical setting, antibody positivity along with typical small intestinal mucosal changes and

response to GFD is helpful to establish the diagnosis. Therefore, in India serological test should be added to the modified ESPGHAN criteria to make a definitive diagnosis of CD.<sup>13</sup>

#### Discussion:

The traditional text of *Ayurveda* suggested that *Grahani Dosha* may be treated by following concept of *Langhana* and using *Deepana* and *Pachana* medicines which help to potentiate Agni and eliminate ama. Purgation therapy with stimulant drugs also helps to remove Ama.

Piccha basti reduces inflammation due to its *grahi*, *Deepana dravya* and *picchila guna*. It also improve the function of apana vata. Uses of *piccha basti*, *Deepana*, *pachana dravya*, *Anshaa-Ansha kalpna* and along with the dietary modifications gives maximum relief in Celiac disease. *Piccha Basti chikitsa* is one of the *Shodhana* Therapy, which posses *Evacuatory*, *Nourishing* and *Deepana* qualities. Charaka in *Atisara chikitsa adhyaya*, mentioned *Basti* in *Jeerna atisara* with weakness of Guda.<sup>14</sup> When *vayu* increased too much in its own place attains great strength, *Basti* is the best measure to overcome *Vayu* combined with *Pitta*. By *Shodhana* therapy, diseases not only get cured but there is chance of nil occurrence. So there is need to conduct *Shodhana* i.e. *Basti* therapy to find sustained, longstanding relief.

#### PICCHA BASTI:<sup>15</sup>

Contents of *Pichha Basti*

1. *Mocharasa*
2. *Dugdha* (Milk)
3. *Ghrita* (*changeri ghritha*)
4. *Til Taila*
5. *Mulethi Kalka*

#### PREPARATION OF PICCHA BASTI:

The fresh flower stalks of *shalmali* should be wrapped around with fresh *kusa* grass and plastered with black earth. This should be heated on cow dung fire. When the outside earth plaster is dried well, it should be brought down and the stalks of shalamali are taken out. Then they are pounded in a mortar and a bolus of 40 gm. There from is pressed in boiled milk and filtered. Then it is mixed with 640gm of *Tila* oil and Ghee 640gm. and added with the paste of *Madhuka* in adequate quantity. This enema should be administered to the patient massaged beforehand.<sup>16</sup>

This enema, acting as evacutive as well as sustaining, overcomes quickly too advanced disorders of *pittaja Atisara*, Chronic diarrhoea and *Grahani*.

#### PROCEDURE OF ADMINISTRATION OF PICHHA BASTI:

The procedure involves the *Poorva Karma*, *Pradhana Karma* and *Paschat Karma*. *Pichha Basti* can be given for 30, 16 or 8 days in *Karma*, *Kaal* and *Yoga Basti* pattern i.e. *Pichha Basti* is given in *Vyatyasa Krama* (alternately) with *Anuvasan Basti*.

Duration of *Basti* cycle for 30, 16 or 8 days depend on the severity of disease and *Bala* of the patient. Patient is explained about the *Pathya- Apathya Ahara- Vihara* (Do's & Don'ts) before the *Basti* treatment.

#### Poorva Karma:

It involves *Snehana* of abdomen, back, thigh and legs followed by *Nadi Sveda*.

#### Pradhana Karma:

- i. Patient is asked to lie down in the left lateral position.
- ii. *Sukhoshna Sneh* is applied in the anal region and on the *Basti Netra*.



iii. *Basti Netra* is introduced gradually & patient is asked to breath in.

iv. *Basti Dravya* is pushed into the rectum till a little quantity is remained in the *Putaka* (to prevent *Vayu* to enter into the *Pakvashaya*)

v. Withdraw the *Netra* gradually.

**Paschat Karma:**

i. Patient is asked to keep lying for 3-4 mins for better absorption of drug from anal region.

ii. Patient is advised to take light diet.

iii. After completion of complete cycle patient is advised to follow the *Sansarjan Karma*.

**Probable Mode of Action of Purva Karma:**

□ *Snehana* and *Svedana* prior to *Basti* do *Anulomana* of *Apaan Vayu* and thus, *Basti* becomes more efficacious.

□ *Abhyanga* also cause vasodilatation in skin and muscle by stimulating receptors of sympathetic nervous system. Vasodilatation increases blood flow and helps to remove toxins.

**PROBABLE MODE OF ACTION OF PICHHA BASTI:**

Possible actions of *Piccha Basti* are –

a) *Shothahara* & *Vrana-Ropaka* (Antiinflammatory & Ulcer-healing)

b) *Raktastambhaka* (Haemostatic agent)

c) *Sangrahi* / *Stambhan* (Anti-diarrhoeal)

d) *Pitta Shamaka*

e) *Agnideepaka*

These actions are due to contents present in it.

Following are the properties of its contents:

1. *Mocharasa* (Resin of *Salmalia malbarica*):

Due to its *Kashaya Rasa* and *Sheeta*

*Virya*, it has *Vranropaka* (Ulcer-healing) property.

□ *Achyarya Charaka* has kept it in *Shonitsthapana Gana*, thus, it checks bleeding (haemostatic agent).

□ Latest researches also prove its *antidiarrhoeal* effect. The *polyphenols* and *tannins* present in *Salmalia Malbarica* provide strength to intestinal mucosa, decrease intestinal secretion, intestinal transit and promotes balance in water transport across the mucosal cells.

□ It is *Picchil* (sticky or lubricant) in nature thus, forms protective film over Intestine and avoid friction over mucosa.

□ *Shalmali* resin (*Mocharasa*) exudates contain *Gallic* and *Tannic* acids. From various researches done recently throughout the world it has been shown that both *Gallic acid* and *Tannic acids* have *Anti-oxidant* and *Anti-inflammatory* actions. *Gallic acid* inhibits *Histamine* release and *Pro-inflammatory Cytokine* production in *Mast cells*.

2. *Ghrita*:

□ *Ghrita* helps in stimulating *Agni* and it also has a *Balya* and *Vrana Ropana* (healing effect).

□ In *Ayurveda* classics it is mentioned that *Ghrita* is best *Pitta Shamak Dravya*. *Pitta* is responsible for inflammation and ulceration process.

□ *Sneha* forms an impervious coating over entire colon. There will be no loss of electrolytes and prevent direct attack of inflammatory mediators on mucosa and hence thereby reduce inflammatory process and facilitate healing.

3. *Sesame Oil (Taila)*:

□ Its *Sukshma* property also helps the drug to reach into the microcellular level.

□ Oil helps in protecting intestinal mucosa from the irritating substances.

□ *Ghrita* and oil also help in forming homogenous mixture.

□ Moreover, Sesame oil contains high level of natural antioxidants namely *sesamol*, *sesamolin*, *sesamin* and *asarinin*. They play an important role in health promoting effects.

□ *Sesamin* is a lignin with potent anti-inflammatory and anti-non-conceptive properties.

#### 4. Milk (*Dugdha*):

□ It makes the *Basti Mridu* and alleviates *PittaDosha*.

#### 5. *Mulethi* (*Glycyrrhiza glabra*):

□ *Mulethi* is *Vata-Pitta Shamak* and has *Shothahar* property.

□ Liquorice (*Mulethi*) has anti-inflammatory, analgesic, anti-oxidant and ulcer healing properties.

□ It also has *Rasayana* property; it helps in increasing the potency of other drugs and general condition of patient.

*Agnideepaka* action:

□ From *Ayurvedic* point of view *Agnimandya* is the root cause of CD so *Agni Deepak* property of *Pichha Basti* helps in breaking the pathogenesis of the disease.

*Sangrahi* action:

□ Simultaneously *Pichha Basti* also has *Sangrahi* property which reduces the bowel frequency and there will also be no loss of electrolytes and protein losing enteropathy.

### DIET INSTRUCTIONS:

- Avoid all those food items that contain gluten like those made from wheat, rye, oats and barley.
- Avoid processed foods that contain gluten. Avoid bread crumbs, soya sauce, vegetable starch, natural flavouring.

- Avoid tea, coffee and caffeine as they contain ingredients that can stimulate the intestines and cause diarrhoea.
- Include yoghurt, buttermilk, juices, pulses and fruits in your diet.
- Include old rice, buckwheat, ragi, whole corn, millets and gluten free oats.
- Include ginger, coriander leaves, lentil, green gram soup, black pepper, nutmeg and skimmed milk in your diet.
- Include herbs like ginger, fennel and cumin in your diet that will stimulate digestive enzyme secretions which will further improve digestion, absorption and clear away the accumulated toxins out of the body.
- Foods items rich in mono-saturated fats such as olive or canola oil are healthy as well as easily

The proactive approach need to be taken for prevention of *Grahani* with the planning of proper diet. We can resume the bowel habit to normal, improve the overall nutritional status of patients and can prevent or reduce the complications of CD 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 appropriate types of fuel in the form of varieties of foods and drinks, which are wholesome, the condition of *Jatharagni* should be suitably and carefully maintained, because the life and the strength of an individual are dependent upon it. After a bird-eye view of present-day practice of diet and lifestyle including the method of food planning, raw ingredients, food

combinations, and food timings, holistic Ayurvedic principles of diet, Pathyapathya, etc., is certainly in a state where it is very indispensable to focus, if the complete health is to be maintained.

### CONCLUSION:

*Grahani roga* represents a group of digestive disorder. it is closely linked with *Agnimandya*, *Koshta gata vata* and *Atisara*. Impaired *agni* and *samana vata* are the most predominant factors in the pathogenesis of *Grahani*. The etiological Factors responsible for CD identified by various surveys, fit in to the Nidana of *Grahani*, explained earlier in the *Ayurvedic* text books. Hence it can be concluded that CD can be treated in *Ayurveda* under the treatment principle of *Grahani*. *Piccha basti* can improve or cure the Celiac disease by enhance healing and subsiding inflammation and irritability of the colon. It also improve the functions of *Apana Vayu* situated in *Pakvashaya* and result into improve of CD.

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