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## Research Article

### EVALUATION OF THE NIDĀNĀRTHAKARATVA OF ATISĀRA – GRAHANI – ARŚA

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*Correspondence	Abstract
<p>Shreevathsa Professor, Head of the Department of Ayurveda Siddhantha, Government Ayurveda Medical College, Sayyaji Rao Road, Mysore, India</p> <p><b>DOI: 10.7897/2321-6328.01410</b></p> <p>Article Received on: 25/10/13 Accepted on: 30/11/13</p>	<p>Nidānārthakara rogas are those diseases which act as the etiological factor for other diseases. The aim of this study was to evaluate the nidānārthakarata or inter relationship of Atisāra (Enterocolitis) – Grahani (Irritable Bowel Syndrome) – Arśa (Haemorrhoids). 30 individuals diagnosed with Grahani and 37 individuals diagnosed with Arśa were taken for the survey study. Retrospective assessment of the patients was done and the data was analyzed using Frequencies / Descriptive statistics and other statistical tests. The study showed that 46.7 % suffered from Atisāra before the development of Grahani and 24.3 % suffered from Grahani before the development of Arśa. This high incidence shows the inter relationship of Atisāra – Grahani – Arśa.</p> <p><b>Keywords:</b> Nidanarthakara Roga, Atisāra (Enterocolitis), Grahani (Irritable Bowel Syndrome), Arśa (Haemorrhoids).</p>

## INTRODUCTION

Atisāra, Grahani and Arśa constitute one of the largest groups of gastrointestinal disorders in general practice. Because of the similarity in clinical features, Atisāra has been co related to Enterocolitis (acute enteric infection), Grahani to Irritable Bowel Syndrome and Arśa to Haemorrhoids in this study. It is told in the Āyurvedic classics that Arśa, Atisāra and Grahani act as nidānārthakara (the cause) of each other.<sup>1,2</sup> The concept of nidānārthakararoga is a very unique fundamental principle of Āyurveda. According to this concept, “certain diseases act as the etiological factor for other diseases.”<sup>3</sup> A survey research was taken up to revalidate the inter relationship of Atisāra (Enterocolitis) – Grahani (Irritable Bowel Syndrome) – Arśa (Haemorrhoids).

### Aim and Objective

To understand the inter relationship of Atisāra – Grahani – Arśa based on the concept of ‘nidānārthakara roga’ through a survey study.

## MATERIALS AND METHODS

### Selection of patients

Patients were selected from the OPD of Government Ayurveda Medical College and Hospital, Mysore and also from other referrals in and around Mysore. 30 individuals diagnosed with Grahani and 37 individuals diagnosed with Arśa were taken for the survey study.

### Instruments

Proctoscope

### Inclusion criteria

- Patients of either sex coming under the age group of 16-70 years.
- Previously diagnosed, freshly diagnosed, treated and untreated cases were selected for the present study.

### Exclusion criteria

Patients with other systemic disorders were excluded.

### Diagnostic Criteria

#### Grahani (Irritable bowel syndrome)

- Muhurbaddhamuhurdrava mala pravrtti.
- Rome II criteria [Abdominal pain or discomfort (12 weeks) relieved after defecation of flatus, change in the stool frequency and form]
- A feeling of incomplete evacuation (tenesmus)
- Bloating / abdominal distention<sup>4</sup>

#### Arśa (Haemorrhoids)

- Bleeding per rectum
- Constipation
- Discharge
- Confirmative diagnosis: Presence of pile mass in per rectal examination and proctoscopy.<sup>5</sup>

### Sampling Method

30 patients fulfilling the diagnostic criteria of Grahani (Irritable bowel syndrome) and 37 patients fulfilling the diagnostic criteria of Arśa (Haemorrhoids) were selected and placed into two groups by purposive sampling for retrospective analysis.

**Whether Ethical clearance has been obtained? Yes.**

Ethical Clearance Number: SRP-2(b)(EC)/GAMC 2012-2013

**Assessment**

Assessment of the patients was done based on the nidanarthakaravta of Atisāra – Grahani – Arśa explained in Ayurvedic classics. Statistical interpretation was based on

- Frequencies / Descriptive Statistics
- Contingency Co efficient test

Analysis was done using SPSS for Window (Statistical Presentation System Software), version 14.0, evaluation version (SPSS, 2005, SPSS Inc. New York).

**Observations**

In the present study 37 individuals diagnosed with Arśa and 30 individuals diagnosed with Grahani were taken for the survey study. The observations of both groups for the present study were done in two stages.

- General observations
- Observations on the inter relationship of Atisāra - Grahani - Arśa

**Group Arśa**

**General Observations**

- Based on religion, it was observed that Hindus had a higher incidence of Arśa 94.6 % when compared to Muslims 5.4 %.
- Based on diet, it was observed that people who take Misrahara had a higher incidence of Arśa 73 % when compared to those who take Sakahara 27 %.
- Based on Agni, it was observed that 62.1 % patients had Agnidushti (Mandagni 29.7 % + Vishamagni 32.4 %) and 37.8 % had Samagni.
- Based on Koshtha, it was observed that 45.9 % had Krura Koshtha, 17 % had Madhyama Koshtha and 9 % had Mridu Koshtha.
- Based on Prakruti, it was observed that 70.3 % were Vata Kapha Prakruti, 16.2 % were Vata Pitta Prakruti and 13.5 % were Pitta Kapha Prakruti

**Observations on the Inter Relationship of Atisāra - Grahani - Arśa**

**Suffered Earlier from Atisāra**

In the present study it was found that 2 patients (5.4 %) suffered earlier from Atisāra before the development of Arśa whereas 35 (94.6 %) patients had not suffered earlier from Atisāra before the development of Arśa.

**Table 1: Showing the incidence of Atisāra in the Arśa Group of patients**

Suffered earlier from Atisāra	No. of Patients	Percentage
No	35	94.6
Yes	2	5.4
Total	37	100.0

**Suffered Earlier from Grahani**

In the present study it was found that 9 patients (24.3 %) suffered earlier from Grahani before the development of Arśa whereas 28 (75.7 %) patients had not suffered earlier from Grahani before the development of Arśa.

**Table 2: Showing the incidence of Grahani in the Arśa Group of patients**

Suffered earlier from Grahani	No. of Patients	Percentage
No	28	75.7
Yes	9	24.3
Total	37	100.0

**Group Grahani**

**General Observations**

- Based on religion, it was observed that Hindus had a higher incidence of Grahani 93.3 % when compared to Muslims 3.3 % and Christians 3.3 %.
- Based on diet, it was observed that people who take Misrahara had a higher incidence of Arśa 73 % when compared to those who take Sakahara 27 %.
- Based on Agni, it was observed that 62.1 % patients had Agnidushti (Mandagni 29.7 % + Vishamagni 32.4 %) and 37.8 % had Samagni.
- Based on Koshtha, it was observed that 45.9 % had Krura koshtha, 17 % had Madhyama Koshtha and 9 % had Mridu Koshtha.
- Based on Prakruti, it was observed that 70.3 % were Vata Kapha Prakruti, 16.2 % were Vata Pitta Prakruti and 13.5 % were Pitta Kapha Prakruti.

**Observations on the inter relationship of Atisāra – Grahani - Arśa**

**Suffered earlier from Atisāra**

In the present study it was found that 14 patients (46.7 %) suffered earlier from Atisāra before the development of Grahani whereas 16 (53.3 %) patients had not suffered earlier from Atisāra before the development of Grahani.

**Table 3: Showing the incidence of Atisāra in the Grahani Group of patients**

Suffered earlier from Atisāra	No. of Patients	Percentage
No	16	53.3
Yes	14	46.7
Total	30	100.0

**Suffered Earlier from Arśa**

In the present study it was found that 5 patients (16.7 %) suffered earlier from Arśa before the development of Grahani whereas 25 (83.3 %) patients had not suffered earlier from Arśa before the development of Grahani.

**Table 4: Showing the incidence of Arśa in the Grahani Group of patients**

Suffered earlier from Arśa	No. of Patients	Percentage
No	25	83.3
Yes	5	16.7
Total	30	100.0

**DISCUSSION**

**Group Arśa**

Religion: Observation based on religion shows that the majority of the patients were Hindus (94.6 %) when compared to Muslims (5.4 %). It may be due to demographic factors. Ahara: It was observed that 73 % patients were on a mixed diet whereas 27 % patients were on a Vegetarian diet. Mixed diet where the reduction of cereal fibers is present causes delay in the faecal transit time in the bowel, thereby giving rise to the high incidence of chronic constipation and ultimately hemorrhoids. Agni: It was observed that 62.1 % patients had Agnidushti (Mandagni 29.7 % + Vishamagni 32.4 %). Vitiation of Agni is one of the main factors for the

development of Arśa according to Ayurveda.

**Koshtha:** It was observed that 45.9 % patients had krura koshtha, 29.7 % patients had madhyama koshtha and 24.4 % patients had mridu koshtha. This shows that faulty habits of defecation are related to the development of Arśa.

**Prakruti:** It was observed that majority of the cases 70.3 % belonged to Vata Kapha prakruti, 16.2 % belonged to Vata Pitta prakruti and 16.2 % belonged to Pitta Kapha prakruti. It is a question of research and analysis whether Vata Kapha prakruti is a predominant factor in Arśa and researches maybe taken up in the future with a larger sample size to evaluate it.

### Group Grahani

**Religion:** Observation based on religion shows that the majority of the patients were Hindus (93.3 %) when compared to Muslims (3.3 %) and Christians (3.3 %). It may be due to demographic factors. **Ahara:** It was observed that 73.3 % patients were on a mixed diet whereas 26.7 % patients were on a Vegetarian diet. **Agni:** It was observed that 90 % patients had Agnidushti (Mandagni 46.7 % + Vishamagni 43.3 %). Vitiating of Agni is one of the main factors for the development of Grahani according to Ayurveda.

**Koshtha:** It was observed that 90 % patients had mridukoshtha and 10 % patients had madhyama koshtha. The mridu koshtha is indicative of the muhurdravamalapravritti of Grahani.

**Prakruti:** It was observed that majority of the cases 90 % belonged to Vata Kapha prakruti and 10 % belonged to Vata Pitta prakruti. It is a question of research and analysis whether Vata kapha prakruti is a predominant factor in Grahani and researches maybe taken up in the future with a larger sample size to evaluate it.

### Interrelationship of Atisāra - Grahani - Arśa

It was observed that 5.4 % suffered earlier from Atisāra before the development of Arśa and 24.3 % suffered earlier from Grahani before the development of Arśa. It was observed that 46.7 % suffered earlier from Atisāra before the development of Grahani and 16.7 % suffered earlier from Arśa before the development of Grahani. The description of the inter relationship of Atisāra - Grahani - Arśa is found in Caraka Samhita, Ashtanga Sangraha, Ashtanga Hrudaya and Bhava Prakasa. Apart from this, the sequence of description of these three diseases by the Acaryas also throws light on their inter relationship. In Caraka Samhita, Arśa Cikitsa has been explained after Grahani cikitsa. In this context, Acarya Cakrapani has commented that Grahani cikitsa is the karyarupa (resultant) of Arśa. (Cakra on Ca. Ci. 15/1)<sup>6</sup>. In Susruta Samhita, the description of Grahani dosha is found along with the description of Atisāra in Uttarantra, Atisārapratishedha adhyaya. This points towards the inter relationship of Atisāra and Grahani. Both Ashtanga Sangraha and Ashtanga Hrudaya have followed Caraka Samhita in explaining Grahani after Arśa in Nidana Sthana. Both have followed Susruta Samhita in explaining Grahani along with Atisāra in Nidana Sthana and explained Cikitsa of Grahani as a separate chapter in Cikitsa Sthana. Arunadatta in his 'Sarvangasundara' commentary on Ashtanga Hrudaya opines that Grahani cikitsa has been explained after Atisāra cikitsa because of 'nidana samanyat' (similarity in etiological factors).<sup>7</sup> Vagbhata himself has stated that 'Arśo Atisāra Grahani vikarah, prayana

ca anyonyanidanabhutah'.<sup>8</sup> The three diseases Atisāra - Grahani - Arśa are caused as a result of the hampered state of agni or digestive fire known as agnimandya. All the text books of Ayurveda have emphasized the role of Agnimandya in the manifestation and development of Arśa - Atisāra and Grahani. As the Jatharagni (strength of the digestive fire) decreases, the vyadhibala (strength) of Atisāra - Grahani - Arśa increases. Conversely, the vyadhibala of Atisāra - Grahani - Arśa decreases as the Jatharagni bala increases. (Ca. Ci. 14/244, Ash. San.Ci. 10/63, Ash. Hru.Ci.8/164). Thus it may be inferred that along with other nidanas of these three diseases, jatharagnimandya is also an important nidana. Along with Mandagni, Vishamagni is also involved in the manifestation of Arśa and Grahani. This means that Vatakruta Mandagni, Pittakruta Mandagni, Kaphakruta Mandagni and Vishamagni are involved in the manifestation of Grahani and Arśa whereas there is involvement of Mandagni alone in Atisāra. Both Caraka Samhita and Ashtanga Hrudaya have described the involvement of Teekshnagni in the manifestation of Grahani. Grahani dosha or Irritable Bowel Syndrome (IBS), was thought to be nothing more than a somatic manifestation of psychological stress.<sup>9</sup> But recent studies show that IBS can also occur as a common complication of acute enteric infection (Atisāra). This phenomenon, known as post-infectious IBS (PI-IBS), denotes the persistence of abdominal discomfort, bloating and diarrhoea that continue despite clearance of the inciting pathogen. A recent systematic review and meta-analysis demonstrated that the risk of developing IBS increases six-fold after gastrointestinal infection and remains elevated for at least 2-3 years post infection. The current conceptual framework regarding the pathophysiologic mechanism for PI-IBS suggests that PI-IBS is associated with altered motility, increased intestinal permeability, increased numbers of enterochromaffin cells and persistent intestinal inflammation, characterized by increased numbers of T-lymphocytes and mast cells, and increased expression of proinflammatory cytokines. This therefore suggests that an exposure to pathogenic organisms disrupts intestinal barrier function, alters neuromuscular function and triggers chronic inflammation which sustain IBS symptoms.<sup>10</sup> Recent studies conducted by a group of scientists from the Department of Internal Medicine, Los Angeles, USA have found that haemorrhoids (Arśa) is the most common colonic lesion which develop in IBS. Organic disease may coexist in an IBS patient, or may develop any time later in the course of the disease.<sup>11</sup>

### CONCLUSION

46.7 % suffered earlier from Atisāra before the development of Grahani and 24.3 % suffered earlier from Grahani before the development of Arśa. This high incidence shows the inter relationship of Atisāra - Grahani - Arśa described by our ancient acharyas. The concept of Nidanarthakara Rogas explained by our ancient Acaryas holds good in the modern era as well.

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**Cite this article as:**

Atul Subramanian, Arun C.R, Sapna, Anand Katti, Shreevathsa. Evaluation of the nidanarthakaravta of atisāra – grahani – arśa. J Biol Sci Opin 2013; 1(4): 330-333 <http://dx.doi.org/10.7897/2321-6328.01410>

Source of support: Nil; Conflict of interest: None Declared