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## Study of the efficacy of Pathadi Ghanavati with Lajamanda in the management of Aamatisara

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### ABSTRACT

Acute Diarrhoea is an important public health problem worldwide. The World Health Organization estimates that there are more than 1000 million cases of Acute Diarrhoea. Loose motion less than 2 weeks that labelled as Acute Diarrhoea. Diarrhoea is described in Avurvedic classics with the name of 'Atisara'. It means passing of excessive flow of watery stool through anus. Most important factor in the pathogenesis of Aamatisara is Mandagni. In present study 50 patients of Aamatisara were selected from OPD and IPD of Kayachikitsa department. For the clinical study Pathadi Ghanavati and Lajamanda was selected as the trial drug which was given for the duration of 7 days in the dose of 1gm twice a day. It was observed that 32% patients were from the age group 51-60 years, 70% were females, 62% were from lower-middle socio economic class. Sama Jivha was found in all the patients. Among results loose motion showed 98.75% relief, 97.82% showed improvement in Udarashoola, 97.43% improvement in Agnimandya and Daurbalya each, 100% relief was seen in Aruchi. All the symptoms showed highly significant results. Hence it can be concluded that Pathadi Ghanavati and Lajamanda is very effective remedy in the patients of Aamatisara.

Key words: Aamatisara, Acute Diarrhoea, Pathadi Ghanavati, Lajamanda.

#### **INTRODUCTION**

Acute Diarrhoea is an important public health problem worldwide. Acute Diarrhoea in developed countries is almost invariably a benign and it is an important health problem in all age groups in rural communities. The World Health Organization estimates that there are more than 1000 million cases of Acute Diarrhoea.[1] Annually in developing countries with 3 - 4 million deaths most often in

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infants and young children.

The main factor concerned in the production of Aama is Mandagni and the impairment of the mechanism responsible for the secretion of the digestive juices. Due to Aama there are some acute conditions such as Jwara (fever), Atisara (diarrhoea), (dysenteries) etc.

Acute Diarrhoea is common and usually due to inadequate sanitation along with poor hygiene and also due to variety of drugs including antibiotics, cytotoxic drugs, PPI'S and NSAID'S may be responsible for Acute Diarrhoea.<sup>[1]</sup> Most common route of transmission is faecal-oral Bacteria, Viruses and Parasites are also causative factors.<sup>[2]</sup>

Diarrhoea related deaths mostly occurs gastroenteritis[1] and dehydration. The clinical presentation and course of illness depends on the etiology of the diarrhoea and the host.

Aacharya Sushruta mentioned Aamaja type of Atisara.[3] Diarrhoea is described in Ayurvedic classics ISSN: 2456-3110

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with the name of 'Atisara'. Atisara term is made up of two terms 'Ati' (excessive) and 'Sara' (passing of liquid matter through anus). [4] It means excessive flow of watery stool through anus. Most important factor in the pathogenesis of Atisara is Mandagni. [5]

In *Aamatisara* patient passes slimy stool with foul, non-agreeable smell and expels less quantity of stool frequently, it also contains the undigested food particles. Patient suffers from other sign and symptoms such as abdominal pain, abdominal distension and *Atopa* are also have been seen. On examination stool sinks in water.<sup>[6]</sup>

Pathadi Ghanavati and Lajamanda contains, Patha, Haritaki, Vatsakbeeja and Shunthi<sup>[6]</sup> and Lehya for Lajamanda. Patha and Haritaki acts as Deepana, Pachana and Grahi Karma. And Shunthi is one of the best herbal remedy for Atisara, which acts on the root cause of disease i.e. Aama.

In Bhaishajyaratnavali preparation is given in the form of Kwatha, but for patients convenience it was converted in the form of Ghanavati. According to Ayurveda Pathadi Ghanavati is said to act as Deepana, Pachana and Grahi and hence for the present study Pathadi Ghanavati and Lajamanda for Tarpan was selected as the trail drug for treating the patients of Aamatisara.

#### Relevance of the study

Now a days, due to wrong dietary habit, Unhygienic condition and eating uncooked diet and other than these condition diarrhoea increases markedly. The incidence and prevalence of Diarrhoea (Atisara) have increased in many countries. In Ayurveda also Acharya Charaka, Sushruta and Vagbhata have mentioned the disease as 'Atisara' in separate chapters. This shows the severity and importance of the disease in a social view. So far above reasons, the disease Atisara has been selected for study purpose, by using 'Pathadi Ghanavati' and for Tarpana, Lajamanda was used.

#### Selection of drug

The formulation (*Pathadi Ghanavati*) selected for the study has described in *Bhaishyajya Ratnavali* in the

management of Aamatisara. It contains Patha, Vatsakbeeja, Haritaki and Shushti, all of them have Grahi, Deepana and Pachana property. Hence the drug 'Pathadi Ghanavati' has been selected for study.

#### **OBJECTIVE OF THE STUDY**

To study the efficacy of *Pathadi Ghanavati* with *Lajamanda* in the management of *Aamatisara*.

#### **MATERIALS AND METHODS**

Patients: Total 50 patients of *Aamatisara* form OPD & IPD Unit of Kayachikitsa department.

**Drug:** For the present study *Pathadi Ghanavati* and *Lajamanda* were used for the management of *Atisara*. The details of the formulation and method of Preparation are as follows.

Table 1: Details of Pathadi Ghanavati<sup>[7],[8]</sup>

SN	Drug	Latin Name	Part used	Quantity	
1.	Patha	Patha Cissampelos Root pariera		1 Part	
2.	Vatsakbeeja	Holarrohena antidysentrica	Seeds andTwacha	1 Part	
3.	Haritaki	Terminalia chebula	Phala (fruit)	1 Part	
4.	Shusthi	Zingiber officinalis	Kanda (Rhizomes)	1 Part	

#### Method of preparation of Pathadi Ghanavati

Pathadi Ghanavati was prepared in the pharmacy of S. C. M. Aryangla Vaidyak Mahavidyalaya, Satara.

- The useful parts of Patha, Vastakabeeja, Haritaki and Shunthi were taken in appropriate quantity and 16 parts of water was added in it.
- The heating process was continued until the mixture was free from water and it was in the cake form 'Ghana'.
- And then a *Ghanavati* of 500mg is prepared by using authentic method as per mentioned in Ayurvedic classics.

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#### Method of preparation of Lajamanda

By using authentic method as per mentioned in Ayurvedic classics.

Quantity per patient -

Laja	25 gm
Water	14 parts (i.e 350 ml)

Laja and water taken in above appropriate quantity.

The mixture were heated till Lajamanda is prepared.

#### **Inclusion Criteria**

- 1. Patients having signs and symptoms of *Aamatisara* described in Ayurvedic classics without any bar of Caste, Sex and religion.
- 2. Patients having age between 16-60 years.
- 3. Acute Diarrhoea.
- 4. The patients may or may not have dehydration. It has been mainly assessed on the basis of clinical parameters. Systolic blood pressure minimum 90mm of Hg was decided as the main criteria for moderate dehydration.

#### **Exclusion Criteria**

- 1. Patients with severe degree of dehydration Diastolic blood pressure minimum
- 2. 60 mm of Hg not less than.
- 3. Loose motions with Melena.
- 4. Patients having age less than 16 and more than 60 Years.
- 5. Patients having severe Cardiac, renal hepatic disease, Tuberculosis,
- 6. Malignancy AIDs etc.
- 7. Pregnant and Lactating women.

#### **Groups of Management**

All the selected patients will be allocated to single group which treated by *Pathadi Ghanavati* and *Lajamanda* and hence; it is a single arm open clinical trial.

The details of drug administration are as follows

**Table 2: Details of drug administration** 

Drug	Pathadi Ghanavati and Lajamanda
Form of drug	Ghanavati (Tablet)
Dose	500 mg - 2 tablets B. D.
Anupana	Koshnajala
Sevanakala	Twice in a day ( <i>Anannakala</i> ) (7 A.M & 5 P.M)
Duration	7 days
Follow up	Every 7 days, Total 3 follow up
Diet	As per <i>Pathyakara Ahara</i> mentioned in Ayurvedic Classics
Vihara	Bed rest

#### **Criteria for Diagnosis**

- Dravamalapravrutti (increased frequency of loose motions)
- Udarshula (pain in abdomen)
- Agnimandya (decreased appetite)
- Daurbalya (fatigue)
- Aruchi (anoxeria)
- Patients having Pichchila, Durgandhita and Sakaphamala Pravrutti.

#### **Assessment Criteria**

#### Dravamalapravrutti (Loose Motions)

Symptoms	Score
Normal defecation	0
1-3 loose motions per day	1
4-6 loose motions per day	2
More than 7 loose motions per day	3

#### Udarashula

Symptoms	Score
No abdominal pain	0
Mild abdominal pain	1
Moderate abdominal pain	2
Severe abdominal pain	3

#### **Agnimandya**

Symptoms	Score
Normal hunger	0
Hunger sensation after 4-6 hrs. after food	1
Hunger sensation after 7-8 hrs. after food	2
No Hunger sensation after more than 10 hrs. after food	3

#### Daurbalya

Symptoms	Score
No fatigue	0
Mild fatigue	1
Moderate fatigue	2
Severe fatigue	3

#### Aruchi

Symptoms	Score
No Aruchi	0
Very few times	1
Frequently	2
Always	3

#### **OBSERVATIONS AND RESULTS**

Among the total number of patients 32% patients were from the age group 51 to 60 years. Females were 70%, 64% patients were housewives, socioeconomically 62% patients were from lower middle class; *Poorvarupa* of *Aamatisara* in present study was Malavshtambha in 44% patients; 66% patients were having Vishamagni and 50% patients having Mandagni; dominancy of Katu and Amla Rasa found in 98% and 58% respectively; 76% patients were having the dominancy of Guru Guna in their diet, Manasichetu were found as a causative factor in 38% patients and Atapsevan in 12% patients; among the chief symptoms Dravamala Pravrutti was found in 98% of patients. Udarshoola was present in 66% of patients followed by Daurbalya in 60% patients and Agnimandya was found in 52% patients. The parameters like loose motions, Udarshoola, Agnimandya, Daurbalya and Aruchi showed highly significant results. 88% patients showed the result within 3 days, 10% patients showed result within 4 days followed by 2% patients showed result within 6 days from the commencement of the treatment.

In results loose motion showed 98.75% relief, 97.82% showed improvement in *Udashoola*, 97.43% improvement in *Agnimandya* and *Daurbalya* each, 100% relief showed in *Aruchi*.

Chart 1: General observations on symptoms of *Aamatisara*.

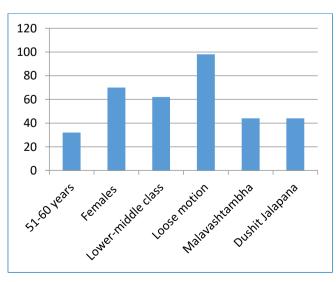
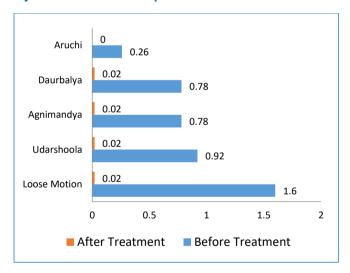


Table 3: Effect of *Pathadi Ghanavati* and *Lajamanda* on *Aamatisara*.

Paramet er		Mean Score		Me an	% Reli	SD	Т	Р
		ВТ	AT	Diff.	ef			
Loose Motion	5 0	1.6	0.0 2	1.58	98.7 5	0.68 89	17.40 93	<0.0 01
Udarsho ola	5 0	0.9 2	0.0 2	0.9	97.8 2	0.72 39	9.00	<0.0 01
Agniman dya	5 0	0.7 8	0.0 2	0.76	97.4 3	0.67 88	7.823 5	<0.0 01
Daurbaly a	5 0	0.7 8	0.0 2	0.76	97.4 3	0.64 80	8.603 1	<0.0 01
Aruchi	5 0	0.2 6	0.0 0	0.26	100	0.52 72	3.487 1	<0.0 01

Chart 2: Results of *Pathadi Ghanavati* and *Lajamanda* on various parameters of *Aamatisara* 



#### **DISCUSSION**

In the present study maximum 32% patients were from the age group 51 to 60 years, Diarrhoea mostly seen in child and old age patient. But in present study maximum patients were from 51 to 60 yrs. Age group, it may be due to age related weak digestive system or it may be because of any autoimmune disorders or due to lack of hygiene and also due to *Vatadosha* dominance in old age. 70% patients were females whereas males were 30% in the current study.

Females especially housewives spend most of the hours in kitchen, so it can be said that due to household work, female have negligence toward hunger, thirst, irregular pattern of food and sleep such condition is responsible for Vata-Pitta Doshaprakopa which further land into Mandagni. Maximum that is 64% patients were housewives. As said earlier, being a housewife, female has to do various kinds of works due to which they have irregular food habits as well as sleeping pattern. This lead to improper digestion and formation of Aama which in turn causes the disease like Aamatisara. Socio-economically 62% patients were from lower-middle class. Due to change in food habits, affinity towards non vegetarian diet, processed food intake and irregular food timing and more tendency to have hot beverages may lead to Agni Dushti which is the cause of Aamatisara. Among the symptoms of disease Aamatisara, Dravamalapravrutii was present in 98% of the patients. Among the Dravamalapavrutti and symptoms Udarshoola indicates the dominancy of Vata Dosha, Agnimandya indicates the dominancy of Kapha and Daurbalya indicates the dominancy of Pitta Dosha. In 44% patients the *Poorvarupa* of *Aamatisara* were Malavashtambha. As described in classical texts of Ayurveda, Malavashtabha Poorvarupa is seen in maximum 44% patient 66% patients were having Vishmagni, where as 50% patients were having Mandagni. This irregularity may work as the reason for distrurbance in *Dhatu Utpatti* and simulteniously producing Aama in the body which make the body susceptible for gastrointestinal disorders such as Aamatisara. Maximum 66% patients were having Vata-Pitta Pradhanaprakruti. Vata Pitta Prakruti is responsible for *Mandagni* and also responsible for Aatragati Vrudhhi. Pitta Kaphaprakruti responsible for Asamyaka Aaharpachana and formation of Aama.

Dushita Jalapana was found as a causative factor in 44% patients, Manasichetu 38% patients, Bahyapadarthasevan in 30% patients. Dushita Jalapana and Bahyapadarthasevana are very good source for microorganisms to enter in body and causes gastrointestinal diseases like diarrhoea. Dushitajalasevana is well known cause of Atisara.

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Atapasevana, Mamsahara Sevana and Ratrijagaran vitiates the Pitta Dosha which causes Asamyaka Aaharpachana and forms Aama. In Manasichetu persons are mostly involed in emotional imbalance and it effects on Dosha, Agni and hence have a tendancy for the development of the disease.

#### Probable mode of action

Patha is the chief constituent of the remedy which acts as Tridoshahara, Agnimandya Nashaka due to it's Tikta, Katu Rasa, Katu Vipak, Ushna Veerya and Laghu, Tikshna Guna. Vatsaka Beeja absorbed Pakvashayagata Kleda, with the help of it's Tikta, Katu, Kashaya Rasa, Katu Vipaka, Sheeta Veerya and Laghu, Ruksha Guna. Haritaki have Deepana, Pachana, Anulomaka, Grahi to manage Aamatisara, and to prevent Malavshtambha. Shunthi acts as a Aamapachaka and Agnideepaka due to it's Katu Rasa, Ushna Virya and Laghu Guna. Lajamanda is useful to correct dehydration, so it can be concluded that it is very good rehydration therapy. Hence Pathadi Ghanavati and Lajamanda worked as an excellent remedy in the patients suffering from Aamatisara.

#### **CONCLUSION**

Etiological factors of Aamatisara explained in Samhitas mentioned even are today. Dravamalapravrutti, Agnimadya, Udarshoola, Daurbalya are symptoms found in patient of Aamatisara, which are indicates Aamavastha of Atisara. Pathadi Ghanavati and Lajamanda shows very significant result in Aamatisara, it may be because Pathadi Ghanavati is having Deepana, Pachana, Vatanulomana and Lajamanda having Tarpana properties. The drug is clinically safe and effective herbal formulation. There was significant changes in clinical parameters such Dravamalapravruti (Vega), Pichhilata in before and after studies. Due to Ushna Virya, Katuvipaka, Tikta Rasa Pradhana Dravyas of Pathadi Ghanavati and Lajamanda. Lajamanda for Daurbalya gave good result, so it can be concluded that it is very good for oral rehydration therapy. Hence this study goes to

that is administration of *Pathadi Ghanavati* and *Lajamanda* helps in fast relief from *Aamatisara*. *Pathadi Ghanavati* and *Lajamanda* shows no side effects in patients. Thus in the management of *Aamatisara*, with proper *Pathya*, this formulation may be a valuble answer.

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