



EFFICACY OF *SHUNTHI KALPA* IN THE MANAGEMENT OF *ATISARA*

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ABSTRACT

Diarrhea (*Atisara*) has long been recognized as an important health problem in all age groups and is a major cause of morbidity and mortality in rural communities of socio-economically backward and developing countries. According to Ayurveda *Atisara* means excessive flow of watery stool through anus. In the present study total 100 patients of *Atisara* were selected from *Atisara* from OPD and IPD unit of Dr. M. N. Agashe hospital, Satara. For the clinical study '*Shunthi Kalpa*' was selected as the trial drug which was given for the duration of 6 days in the dose of 2gm thrice a day. It was observed that 36% patients were from the age group 10-20 yrs, 68% were females, 56% were from lower socio economic class. *Sama Jivha* was found in all the patients and *Jala Nimajjana Pariksha* was positive in 96% patients. Among results *Dravamalapravritti* showed 96.36% relief, 94.44% improvement in *Udarshula*, 88.85% improvement in *Agnimandya*, 83.73% relief in *Daurbalya* and 78.66% improvement was seen in *Aruchi*. All the symptoms showed highly significant results. 92% patients showed complete relief among which 60% were within first 3 days. Hence it can be concluded that *Shunthi Kalpa* is very effective remedy in the patients of *Atisara* having *Amavastha*.

KEYWORDS: Diarrhea, *Atisara*, *Shunthi Kalpa*.

INTRODUCTION

Diarrhea (*Atisara*) has long been recognized as an important health problem in all age groups and is a major cause of morbidity and mortality in rural communities of socio-economically backward and developing countries. Globally, diarrhea accounts for more than 5-8 million deaths annually, majority of them are infants and children below 5 years old. [1,2] 88% of diarrhea-related deaths are caused by inadequate sanitation along with poor hygiene and clinically due to dehydration, which results from the loss of electrolytes in diarrheal stools.[3]

Diarrhoea is described in Ayurvedic classics with the name of "*Atisara*". *Atisara* term is made up of two terms "*ati*" (excessive) and "*sara*" (passing of liquid matter through anus). It means excessive flow of watery stool through anus.[4,5] Dalhana on his commentary on Sushruta samhita stated that passing of watery stools in increased quantity is a characteristic feature of *Atisara*. Most important factor in the pathogenesis of *Atisara* (diarrhea) is *Mandagni*. *Mandagni* is root cause of *Amadosha* and it is the crucial factor for manifestation of most of the diseases including *Atisara*. [6] The Etiological factors are basically classified as Dietetic (*Aharaj*), Behavioral (*Viharaj*), and Psychological (*Manasik*), Social (*Samajik*) etc. Acharya Charaka, Vagbhatta and Sushruta mentioned 6 types of *Atisara* (diarrhea) (*Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja*, *Bhayaja*, *Shokaja*) but Acharya Sushruta has mentioned *Amaja* type of *Atisara* (diarrhea) instead of *Bhayaja* variety. Involvement of *Vatapradhanatridosha dusti* can be figured out in *Samanya Samprapti* of *Atisara* (diarrhea) leading to *Agnimandya* and *Ajeerana* which in turn causes *Dushti* of *Koshta* and *Pakwamashaya*. As a result *Apdhatu* attains *Vimargagamana* from different part of the body to *Koshta*, leading to increase in *Dravata* of *Puresha* in

Pakwasaya manifesting as *Atisara*. [7] The symptoms of *Amatisara* include *Amayukta shweta varna mala Pravriti* with bad odour. *Mala* along with pain, *mala* along with sound (*Adhmana*, *Atopa*) feces comes along with the food and the *mala* will have different colors coming out with difficulty very frequently. In *Pakwa* stage *Vibadha*, *Alpalapam mala*, *Parikarthika* (gripping pain), *Romaharsha* (horripilation), associated with *Shwasa* (difficulty in breathing) and *Shushkamukha* (dryness of mouth) are found. There is pain in *Kati*, *Uru*, *Trika*, *Janu*, *Prishtha*, *Parswa* (waist, thigh, hips, knees, back and sides). *Atisara chikitsa* is planned after seeing the *Sama* and *Nirama avastha* of the *Dosha*. Therapies which are mainly of *Deepana*, *Pachana* and *Langhana* should be adopted in the *Ama avastha* of the disease. In the *Niramavastha*, the drugs which have *Stambhana* properties are to be selected.

In *Yogaratanakara*, *Shunthi Kalpa* is mentioned in the treatment of *Atisara*. [8] According to Ayurveda, *Shunthi* is said to act as *Deepana*, *Pachan* and *Grahi* and hence for the present study *Shunthi Kalpa* was selected as the trial drug for treating the patients of *Atisara*.

Aim

To study the efficacy of *Shunthi Kalpa* in the management of *Atisara*.

OBJECTIVES

1. To study the etiopathology and prognosis of *Atisara*.
2. To study the standardization of ingredients of *Shunthi Kalpa*.
3. To Study the mode of action of *Shunthi Kalpa*.

MATERIALS AND METHODS

1. Patients: Total 100 patients of *Atisara* from OPD and IPD unit of Dr. M. N. Agashe hospital, Satara.

2. Drug: For the present study *Shunthi Kalpa* was used for the management of *Atisara*. The details of the formulation and method of preparation are as follows.

Table 1: Details of Shunthi Kalpa

| Sr. | Drug | Latin name | Part used | Quantity |
|-----|-----------|----------------------|-----------------|----------|
| 1 | Shunthi | Zingiber officinalis | Kanda (rhizome) | 1 parts |
| 2 | Go ghrita | Cow ghee | As it is | 1 parts |
| 3 | Seeta | Sugar | As it is | 1 part |

Method of Preparation of Shunthi Kalpa

- Adraka khanda shodhana* - The well grown *Adraka khanda* by making pieces, washed with simple water and made clean by removing clay and other impurities.
- Preparation of *Shunthi* from *Adraka khanda* - the *Twaka* was removed with knife after cleaning *Adraka khanda*. This *Twak-viraheet Adraka khandas* are poured in a iron pan containing milk and boiled. After boiling *Adraka khandas* were removed from pan and kept in dishes in sunlight for drying. The time required for complete drying process was 5 days.
- Choornikarana* - the *Shunthi* was taken in *Khalwayantra* after making small pieces. With the help of *Peshanaka* it was crushed and made in the powder form. With the help of four folded muslin cloth, fine *Vastragala choorna* was obtained.
- Bharjana sanskar* - Fine *Vastragala choorna* was taken in iron pan, kept on gas stove and *Bharjana sanskar* was done by adding little amount of *Go-ghrita*. It was added in such amount that the *Shunthi choorna* does not get burned. For *Bharjana sanskar*

mandagni was given and it was completed when we felt the smell of shunthi and slight change in colour.

- Sharkara mishrana - Ghrita bharjit shunthi choorna* was kept in pan and allowed to cool. Same quantity of sugar in powder form was added and mixed well. Finally a homogenous mixture is obtained and it is the *Shunthi Kalpa*.

Inclusion criteria

- Patients having classical signs and symptoms of *Atisara* described in Ayurvedic classics without any bar of caste, sex and religion.
- Patients having age between 10 - 60 years.
- The patients having moderate degree of 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

- Patients with severe degree of dehydration.
- Patients having age less than 10years and more than 60 years.
- Loose motions with Melaena.
- Known case of poisoning taken orally, like insecticides, pesticides etc.
- Patients having severe cardiac, renal, hepatic disease, Malignancy, AIDS etc.
- Pregnant and lactating women.

Groups of management

All the selected patients were allocated to single group treated by *Shunthi Kalpa*. Hence, it was a single arm open clinical trial. The details of drug administration are as follows

Table 2: Details of Drug Posology

| | |
|--------------|---|
| Drug | <i>Shunthi kalpa</i> |
| Form of drug | <i>Choorna</i> |
| Dose | 2 grams T.d.s. |
| Anupana | <i>Shruta sheeta jala</i> |
| Sevana kala | <i>Nirannakala</i> (Empty stomach) 8.00 a.m., 3.00p.m. and 10.00 p.m. |
| Duration | 6 days |
| Follow up | Every week and whenever needed |
| Diet | As per <i>Pathyakara Ahara</i> mentioned in Ayurvedic classics |
| Vihara | Bed rest |

Criteria for diagnosis

- Dravamalapravritti* (increased frequency of loose motions)
- Udarshula* (Pain in abdomen)
- Agnimandya* (decreased appetite)
- Daurbalya* (fatigue)
- Aruchi* (Anorexia)
- Patients having *Pichchila*, *Durgandhita* and *Sakapha malapravrutti*.

Scoring and Gradation Pattern ^[9]

1. Loose motions

| Symptom | 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 |

2. Udarashula

| Symptom | Score |
|-------------------------|-------|
| No abdominal pain | 0 |
| Mild abdominal pain | 1 |
| Moderate abdominal pain | 2 |
| Severe abdominal pain | 3 |

3. Agnimandya

| Symptom | Score |
|---|-------|
| Normal hunger | 0 |
| Hunger sensation after 4-6 hours after food | 1 |
| Hunger sensation after 7 - 10 hours after food | 2 |
| No hunger sensation after more than 10 hours after food | 3 |

4. Daurbalya

| Symptom | Score |
|------------------|-------|
| No fatigue | 0 |
| Mild fatigue | 1 |
| Moderate fatigue | 2 |
| Severe fatigue | 3 |

5. Aruchi

| Symptom | Score |
|----------------|-------|
| No Aruchi | 0 |
| Very few times | 1 |
| Frequently | 2 |
| Always | 3 |

OBSERVATIONS AND RESULTS

Among the total number of patients 36% patients were from the age group of 10 to 20 years. 68% patients were female and 98% patients were of Hindu religion. Occupation wise 44% patients were housewives, 56% patients were from poor family. The number of patients living in urban area was 60%. According to *Prakriti* 36% patients were of *Vata Kapha* and *Vata Pitta Prakriti* each. *Madhyama Koshtha* was found in 68% patients. Among the causative factors *Shakahar* was present in 52% patients followed by *Mamsahar* in 24% patients. *Dushita Jala Sevan* was found as a cause in 16% patients whereas *Madyapana* was found in 8% patients. Tongue examination revealed that 100% patients were having '*Sama Jivha*'. In case of *Dosha* predominance, *Vatanubandha* and *Kaphanubandha* was found in 40% patients each whereas 20% patients were having *Pittanubandha*. The *Jalanimajjana Pariksha* was found positive in 96% patients. In stool examination most of the patients showed the presence of starch,

mucous, pus cell and cyst of E.H. In results most of the patients showed the improvement in appetite within first 3 days. Among the chief symptoms *Dravamalapravritti* was found in 100% of patients. *Udarashula* was maximum present in 98% patients followed by *Agnimandya* in 96% patients each. Next to it 86% patients were having *Daurbalya* and *Aruchi* was present in 84% patients. In results *Dravamalapravritii* was relieved by 96.36% whereas 94.44% improvement was seen in *Udarashula*. 88.85% relief was observed in *Agnimandya*. *Daurbalya* and *Aruchi* showed 83.73% and 78.66% relief respectively. All the parameters showed highly significant results. Complete relief was observed in 92% patients whereas 8% patients showed no relief. 24% patients showed the relief within 24 hrs, 56% patients within 48% hrs and 12% patients showed relief within 72 hrs from the commencement of the treatment.

Table 3: Effect of Shunthi Kalpa on Atisara

| Symptoms | N | Mean | | % Relief | S. D. | S. E. | 't' | P |
|---------------------------|-----|-------|-------|----------|-------|-------|--------|---------|
| | | B.T. | A.T. | | | | | |
| <i>Dravamalapravritii</i> | 100 | 2.523 | 0.462 | 96.36 | 0.660 | 0.183 | 18.982 | < 0.001 |
| <i>Udarashula</i> | 98 | 2.769 | 0.154 | 94.44 | 0.506 | 0.140 | 18.623 | < 0.001 |
| <i>Agnimandya</i> | 94 | 2.892 | 0.462 | 88.85 | 0.599 | 0.166 | 13.424 | < 0.001 |
| <i>Daurbalya</i> | 86 | 2.227 | 0.385 | 83.73 | 0.303 | 0.084 | 9.947 | < 0.001 |
| <i>Aruchi</i> | 84 | 2.312 | 0.632 | 78.66 | 0.566 | 0.152 | 7.581 | < 0.001 |

DISCUSSION

The age group 10-20 years includes the school going children which are very much fond of eating the outside food, which may be the probable reason to cause *Atisara* in them. The dominancy of Hindu patients is indicative of the geographical dominancy of Hindu people in Satara district. Most of the Indian housewives have the

faulty life style like *Adhyashana*, *Vishamashana*, and eating stale food etc. which affects the Agni leading to *Ama* formation and diseases like *Atisara*. Poverty is the chief social cause for the formation of the diseases like diarrhea. Unhygienic water, food, cloths etc is the main source of infection in such people. Regarding *Prakriti*, there is no

such relation has been established between *Prakriti* and *Atisara* till date. In urban area the people of now days are consuming the fast food very frequently which may be the cause of *Ama* formation leading to *Atisara*. Most of the patients were suffering from *Mandagni* previously, which clearly indicates that *Agnimandya* is the prior stage of almost all the diseases. Here in case of *Atisara* also *Mandagni* leads to *Ama* formation which further leads to *Atisara*. In the present study the number of patients taking vegetarian food were more, may be because there are some vegetables which increases the bowel movement causing diarrhea. Regarding *Dushita Jalasevan*, it is well known fact that diarrhea is a water born disease. *Madyapana* is mentioned as one of the cause of *Atisara* according to *Atisara*. *Dravamalapravritti* was present in almost all the patients which is nothing but the cardinal symptoms of the disease. *Udarshoola* was found present in most of the patients followed by *Aruchi*. All these symptoms are indicative of the *Ama* condition of the patient. *Jivha Pariksha* is very important tool of Ayurveda to decide the *Sama-Nirama* condition of the disease. In present study all the patients were having *Sama Jivha* again indicating the *Amavastha* of the disease. In *Atisara* one important examination is mentioned in Ayurveda – *Jala Nimajjana Pariksha* in which if the Mala sinks down in water, the stool is considered as *Sama*. Here, in present study 96% patients were having positive *Jala Nimajjana Pariksha* which definitely confirms the stage of *Amatisara*. In results all the symptoms showed highly significant improvement. 60% patients showed the improvement in first 3 days which proves that *Shunthi Kalpa* is very much effective in *Atisara* especially in *Amavastha*.

Probable mode of action

Shunthi is the chief constituent of the remedy which acts as *Amapachak* and *Agnideepak* due to its *Katu Rasa*, *Ushna Veerya* and *Laghu Guna*. It also does the function of *Vatanulomana* due to *Madhura Vipaka*. *Shunthi* is told as *Grahi* which is again due to its *Ushna Veerya* and *Katu Rasa*. It also works as *Shulaprashaman* due to *Ushna Veerya*. Hence, after taking the *Shunthi Kalpa*, the *Ama* condition of the patients was mitigated due to *Amapachak* activity of *Shunthi*; along with this the *Agni* was also increased. *Shunthi Kalpa* due to *Grahi* nature absorbed the excessive liquid in *Purisha* and corrected its pathology. *Shunthi* possesses *Ruksha Guna* which may act as *Vataprakopaka* hence *Ghrta* was added in *Shunthi Kalpa* to minimize the *Rukshata* of the *Shunthi*. Further sometimes *Shunthi* may cause burning sensation due to *Katu Rasa* hence *Sharkara* was added to minimize the *Katuta* of

Shunthi. So, together *Shunthi Kalpa* worked as an excellent remedy in the patients suffering from *Amatisara*.

CONCLUSION

The incidence of disease is seen more in the age group 10-20 years. Females were more affected by the disease. The occurrence of the disease was highest in lower socio economic class. The symptoms *Dravamalapravritti*, *Udarshoola*, *Aruchi* etc. indicate the *Amavastha* of the disease. *Sama Jivha* was observed in all the patients. *Jala Nimajjana Pariksha* was also positive in almost all the patients. *Shunthi Kalpa* showed highly significant results in *Dravamalapravritti*, *Udarshoola*, *Agnimandya*, *Daurbalya* and *Aruchi*. Hence it could be concluded that *Shunthi Kalpa* is a very effective remedy for *Atisara* especially in *Amavastha*.

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Chart 1 : General observations of *Atisara* patients

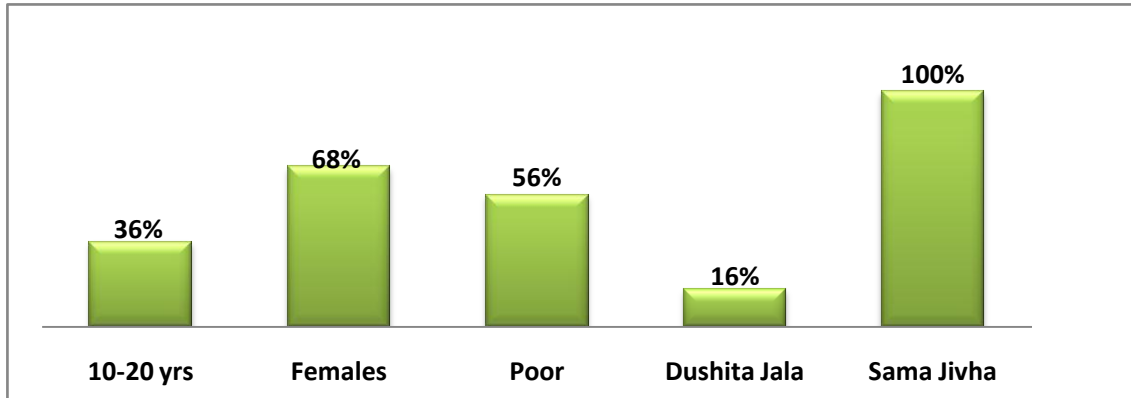


Chart 2 : General observations on Symptoms of *Atisara* patients

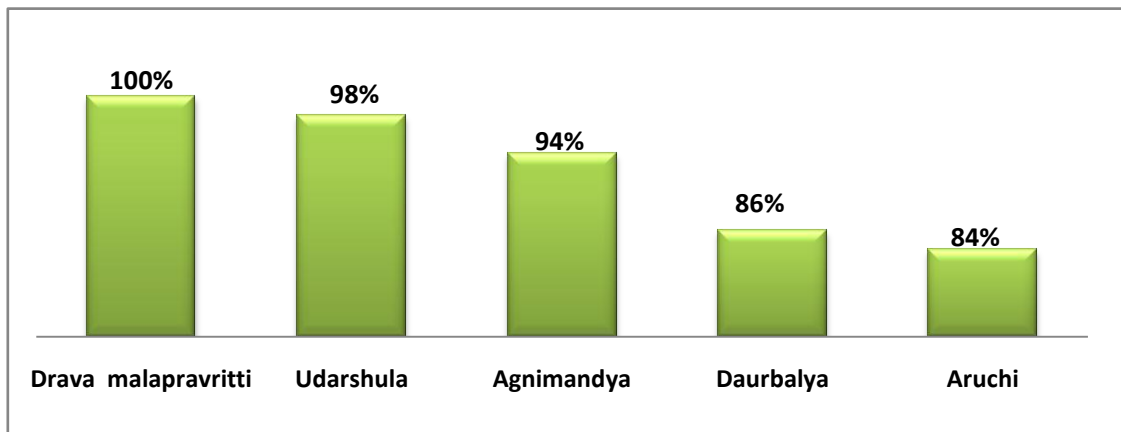


Chart 3 : Showing the improvement in symptoms of patients of *Atisara*

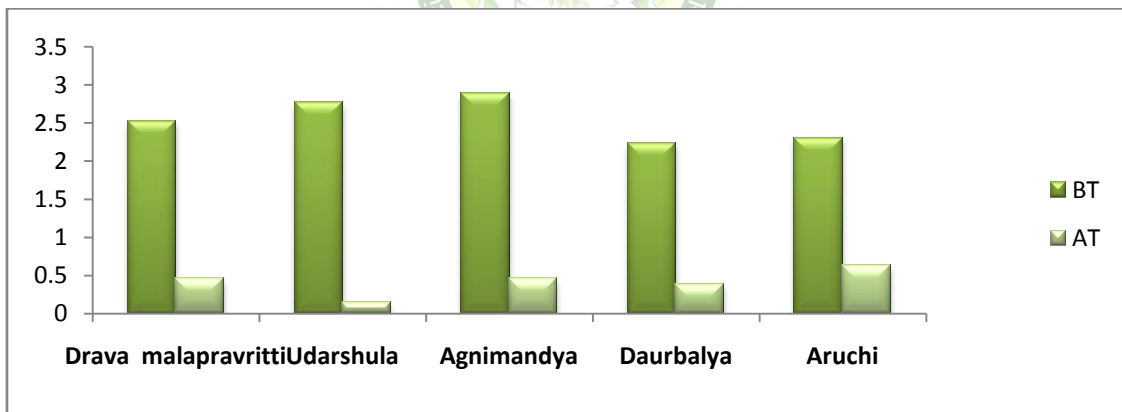


Chart 4 : Showing the improvement in patients of *Atisara*

