DIARRHOEA IN CHILDREN AND ITS AYURVEDIC MANAGEMENT: A REVIEW

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ABSTRACT

Diarrhoeal disorders are the second commonest cause of morbidity and mortality in preschool children after acute respiratory infections in children under 5 years of age.1 It is responsible for killing around 525000 children every year. It is one of the major disease scattered worldwide, specially in tropical and subtropical countries. It is a leading cause of malnutrition in children. In Ayurveda diarrhea can be correlated to Atisara. There are several modalities described in Ayurveda for prevention as well as management of Atisara. The main cause of Atiasara as mentioned in Ayurveda is vitiation of Annavaha Srotas due to improper diet, which leads to agnimandya and production of Ama, the main pathological factor of Atisara. The formulations which are described in different Ayurvedic texts for treatment of Atisara, mainly improve the Agni, which in turn lead to decrease in Ama production and decreasing the frequency of stool. This article presents various aspect of Atisara and its management with Ayurvedic formulations.

KEYWORDS: Atisara, Agni, Ama, Annavaha srotas, Agnimandya.

INTRODUCTION

The term diarrhoea is derived from Greek and it means ‘To flow through’.2 Since normal frequency of stool varies in children, diarrhea is defined as ‘Sudden change in frequency and cosistancy of stool’.3 According to WHO diarrhea is having three or more loose liquid stool
per day.’ It may be infectious and non-infectious. In infective diarrhea the main causative organisms (bacteria, virus and parasite) spread through contaminated food, drinking water and from person to person as a result of poor hygiene.\textsuperscript{[4]}

**TYPES OF DIARRHOEA**

1) Acute watery diarrhea – lasts several hours or days and includes cholrea.
2) Acute bloody diarrhea- also called dysentery
3) Persistant diarrhea- lasts 14 Days or longer.

Each episode of diarrhea deprives the child of the nutrition necessary for growth. during diarrhoeal episodes, water and electrolytes are lost through liquid stools, vomits, urine and breathing, dehydration occurs when these losses are not replaced.

**Degree of dehydration is rated on the scale of three\textsuperscript{[5]}**

1) Severe dehydration- (At least two of the following signs)
   - Lethargy/ unconsciousness
   - Sunken eyes
   - Unable to drink or drink poorly
   - Skin pinch goes back very slowly (>2 seconds)

2) Some dehydration (two or more of the following signs)
   - Restlessness, irritability
   - Sunken eyes
   - Drinks eagerly, thirsty

3) No dehydration- not enough signs to classify as some or severe.

Malnutrition and diarrhea- children who die from diarrhea often suffer from underlying malnutrition, which makes them more vulnerable to diarrhoea. Each diarrhoeal episode makes malnutrition even worse. diarrhoea is a leading cause of malnutrition in children under five years old.

**MANAGEMENT OF DIARRHOEA**

1) Prevention of diarrhea\textsuperscript{[6]}
   - Improvement of nutritional status.
• Personal hygiene (handwashing before handling food; soap and water handwash after toilet, periodic trimming of nails)
• Safe drinking water.
• Good sanitation and sewage disposal.
• Exclusive breastfeeding till 4-6 months followed by proper complementary feeding practices.
• Avoidance of carriers from food handling jobs.
• Health education: use freshly cooked food; store food in clean container; Avoid exposure of food to dust and flies; wash and peel vegetables and fruits before giving to a child
• Vitamin A supplementation as per national program.
• Vaccines
  - Measles vaccine
  - Typhoid vaccine
  - Rotavirus vaccine
  - Cholera vaccine

2) Key measurement to treat diarrhoea includes following
• Rehydration with ORS solution. It is absorbed in the small intestine and replaces the water and electrolytes lost in the faeces.
• Zinc supplementation - zinc supplements reduce the duration of diarrhea episodes by 25% and associated with 30%.
• Rehydration with Intravenous fluids in case of severe dehydration or shock.
• Nutrient rich foods - the vicious cycle of malnutrition and diarrhea can be broken by continuing to give nutrient rich food – including breast milk- during an episode and by giving a nutritious diet – including exclusive breastfeeding for six months of life – to the children when they are well.

AYURVEDIC REVIEW OF DIARRHOEA

DERIVBATION OF WORD DIARRHOEA

Diarrhoea is described in Ayurvedic texts as “Atisara”. The term Atisara is derived from two words “Ati” (Excessive) and “Sara” (passing of liquid matter through anus).

“Guden bahudravsaranam atisaram”
Which indicates increase in frequency as well as change in consistency of stool.
1) NIDANA (CAUSE)
Different Faulty dietary habits and intake of contaminated food items, water are said to be the main etiological factors responsible for atisara. As mentioned by acharaya Charak

Guru atisanigdha rukshan ushana drava sathula atishitalayi.
Virudha adhyashana ajirna vishmayeshchapi bhojayi.
....Dushta ambu Madhya pan[8]

2) SAMPRAPTI (ETIOPATHOGENESIS)
Eating this type of contaminated food items and water leads to the vitiation of *vata dosha* and *apadhatu* (water element). this vitiated vata brings apa dhatu to the koshtha (GIT)., which pacifies the agni and increses the water content in stool. thus this stool which has high water content comes out in more quantity as well in more frequency.

3) PURVAROOPA (PRODROMAL SYMPTOMS)[9]
Indigestion, Pricking pain in chest, rectum, abdomen, abdominal distension and downward movement of flatus get obstructed.

4) ROOPA (SYMPTOMS)
Symptoms Mainly depend on the type of dosha involved in it.

TYPES

<table>
<thead>
<tr>
<th>Vataja</th>
<th>Pittaja</th>
<th>Kapahaja</th>
<th>Tridoshaja</th>
<th>Ratkaatisara</th>
<th>Shokajatisara</th>
<th>Bhayajatisara</th>
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<td>Shokaja and vhayaj atisara have symptoms of vataja atisara.[10]</td>
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PREVENTION
Atisara can be prevented by improving sanitation, clean drinking water and hand washing with soap everytime after toilet and before meals and avoiding the nidana (causative factors).

TREATMENT
Nidna parivarjana (Avoiding the cause) is the baseline treatment.
Breaking of samprapti of disease by various ayurvedic formulations.
Treatment of atisara depends on its stage whether it is in Amavashta or Pakvavastha.\textsuperscript{[11]}

So it’s important to know the symptoms of amavastha as well as pakvavastha.

In amavastha grahi (to hold) medicine is not given to patient instead patient is put on light food and medicine with pachana (digestive) property.

In pakvavastha grahi (water absorbing) medicine is given.

Various Ayurvedic formulations used in Atisara

1) Churna: Dhatkyadi churna, Balachaturbhadra churna, lavanchatusama churna Dadimchatusama churna.

2) Kwatha: Dhatkyadai kwatha, karakradi kwatha.

3) Ghrita: Changeri ghita.

4) Leha: Lavang chtausama leha, dhatkyadi leha, balakutajavleha.

5) Rasa: Mahagandhak rasa, karpur rasa, balarka rasa.

6) Kshara: Chincha kshara.

These formulations used in Atisara mainly have deepana, pachana and grahi properties.

CONCLUSION

Atisara is the disease of GIT and it has aaharaj and viharaja Nidana and its samprapti involves vitiation of vata dosha and apa dhatu along with agnimandya and mala drvata. Its nidana indicates its occurs mainly due to unhygienic conditions that why it is found more in children of low socio economic status. As its samprapti involves agnimandya and mala dravta and the Ayurvedic formulations used in its treatment usally have deepana, pachana and grahi property. These formulations increase the appetite so reduce the ahnimadaya and due to pachana property they decrease the ama formation. the grahi property of ayurvedic formulations helps in reducing the frequency of stool due to soshana property. the various food receipies advised in atisara according to Ayurveda such as peya, manda etc helps in replacement of ongoing water loss. So ayurvedic formulations mainly act by breaking the samprapti of disease. Thus ayurveda offers various treatment modalities for management of symptoms of atisara as well as preventive aspect of atisara by Nidanaparivarjana.

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