PEDIATRIC MANIFESTATION OF IRRITABLE BOWEL SYNDROME AND AYURVEDIC MANAGEMENT: A CASE REPORT

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ABSTRACT

Irritable bowel syndrome (IBS) is a common and bothersome disorder in children with an increasing prevalence noted during the past two decades. It has a significant effect on the lives of affected children and their parents and poses a significant burden on healthcare systems. As the patho-physiology of IBS is multifactorial it is difficult to overcome the therapeutic demand of childhood IBS using the same conventional therapeutic agents. The treatment trials are still going on to understand the paediatric IBS and currently focusing on multiple combined interventions in modern science.

Background: A 14 years old male patient came to OPD (29/02/2020) having complaint of frequent abdominal pain with increased frequency of motion along with visible mucus discharge whole day since 15 days with frequent episodes since last 2 years.

Methodology: In Ayurveda this problem comes under Jatharagni dusti and the present case has been successfully treated as per treatment regimen of Grahani chikitsa.

Result: The complete relief has been seen in 6 weeks.

KEYWORDS: Irritable bowel syndrome (IBS), Agnidusti, Grahani.

INTRODUCTION

Irritable bowel syndrome (IBS) is a common abdominal condition affecting children and adolescents. IBS typically presents as abdominal pain and is associated with bowel changes, including diarrhea, constipation, and alternating diarrhea and constipation.¹ IBS can be negatively impact young patients’ quality of life, resulting in poorer school attendance and increased healthcare expenditures.

It is a chronic disorder and common cause of recurrent abdominal pain (RAP) in children that affects the large intestine or colon.²

The exact physical cause of IBS is not known. A child with IBS may have a colon that is more sensitive than normal. Researchers believe a combination of physical and mental health problems can lead to IBS. The possible causes of IBS in children include brain gut signal problem, gastro-intestinal motor problem, hyper-sensitivity to food, psychological problem, post bacterial gastroenteritis, genetic predisposition or family history of same problem³,⁴.

The symptoms of each pediatric IBS patient may vary. Symptoms may include: episodic abdominal pain, change in bowel habits such as diarrhea or constipation, nausea, Feeling dizzy, loss of appetite, bloating, cramping, mucus in the stool.

Table 1: Rome IV Criteria for Irritable Bowel Syndrome (IBS) In Children

| Diagnostic criteria for IBS-(at least 2 months history) |
|--------------------------------------------------------|
| Abdominal pain at least 4days /month associated with one/more of the following- |
| Related to defection- A change in frequency/ consistency(form) of stool |

In children with constipation the abdominal pain does not resolve after resolution of constipation*

*
Type A | Type B | Type C
---|---|---
IBS with predominant constipation- More than 25% of bowel movement with Bristol stool form 1,2 | IBS with predominant diarrhea- More than 25% of bowel movement Bristol type 6,7 | IBS with mixed type bowel habits

*Children in whom the pain resolves have functional constipation, not irritable bowel syndrome.

The Bristol Stool Scale is a diagnostic tool to evaluate samples of human feces based on the shape and consistency of the stool. Samples are then assigned a number 1–7 that corresponds to descriptions on the scale. (table-2)

**Table 2: Bristol Stool Scale**

| Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | Type 6 | Type 7 |
|---|---|---|---|---|---|---|
| Separate hard lumps, like nuts (hard to pass) | Sausage shaped but lumpy | Sausage shaped but with cracks on surface | Sausage/snake like smooth and soft | Soft blobs with clear cut edges(easy to pass) | Fluffy pieces with ragged edges, mushy | Watery, no solid pieces(entirely liquid) |
| Severe constipation | Mild constipation | normal | normal | Lacking fibre | Mild diarrhea | Severe diarrhea |

Role of diet-as IBS is commonly attributed to ingestion of different food items such as certain carbohydrates and fats. There is some evidence that higher intake of spicy food and fried food and food allergy increase the risk of IBS. So, diet restriction is very important in management of IBS along with medication and common food items restricted in IBS are mentioned here.

**Table 3: Restricted food items**

| Fruits & vegetables | Cereals | Dairy | Other |
|---|---|---|---|
| Fructose rich fruits-apple, mango, pear, watermelon | Kidney beans, Soya bean | Milk & cheese (lactose) | Artificial sweeteners like sorbitol etc. |
| Green bell pepper, beetroot, brinjal /eggplant, mushroom | Chickpeas | Yogurt | Honey |
| Cauliflower, cabbage | Wheat | Ice-cream | Corn syrup |

In Ayurveda all digestive problems of stomach are related to Jatharagni. The specific place (Sthana) of this Agni is Pittadhara kala or Grahani and the Dusti disease is called Grahani rog. It is mentioned in Samhitas that Grahani dusti takes place due to the factors responsible for Agnimandya or Pachakagni vikruti.

Therefore, the treatment of indigestion (Ajirna) means Agnideepan chikitsa is best for Grahani roga as mentioned in various Ayurvedic texts. Additional treatment vary as per the Dosha predominance because four types of Grahani mentioned in Samhitas. The etiology (Nidan) of Grahani are bad food habits like untimely food intake, heavy or excessive food intake even in indigestion, contaminated food intake etc.

There are two main treatment plan has been mentioned as per symptoms if Sama grahni lakshana like Vistambh (constipation), Prasek (excessive salivation), Aruchi (anorexia), Udar dah (burning), Vedana (pain), Gaurav (heaviness) present, Shodhana chikitsa (purification therapy) mainly Vamana and/or Virechana required in Kosthgat sama doshaj condition.

If Samata is Rasagat and spread in Sarvasharir gat/ Sarvang then Langhan and Pachan treatment plan has been mentioned.

There are various formulations mentioned in Grahani chikitsa adhyaya in Samhitas. The importance of Takra is mainly highlighted in various texts. Takra is best for Grahani rog having Madhur vipak, Ushna virya, Rakha guna pradhan, Vatakapha shamak without Pitta prakop and mainly indicated in kaphaj grahanirog.

**Case report**

A 14 years old male patient (case paper no-20/G5934; UIN=0091418) having weight 38.3kg, height 153cm, BMI=16.4 came to OPD (29/02/2020) having complaint of frequent abdominal pain with increased frequency of motion along with visible mucus discharge whole day since 15 days with frequent episodes since last 2 years. His abdominal pain was not subsided after defecation. In his...
associated complaint he has loss of appetite, weakness and slow weight loss.

He has taken many allopathic medicines including Antacid (Pantoprazole), Antimicrobial drugs (Metronidazole, Ofloxacin etc.) anti-helminthic (Albendazole), Probiotics along with anti-spasmodic drug, frequently but he did not find complete relief.

In his food history he used to take mixed diet including chicken and eggs. He was frequently ingest outside fried food like Samosa, Wada pav (bread) etc.

General examination
Nadi-vatakaphaj, body feel –cold and sweaty, Jivha-manda samata, H/R=72/min, Temperature -97.6°F; R/R-27/min

Systemic Examination
Gastro-intestinal system– On examination P/A soft, tenderness present (+) in epigastric and umbilical region.

No abnormality detected in other systemic examination.

Investigations
1. USG abdomen and pelvis (16th September 2019) finding-Thick and edematous visualized bowel loops at present. No evidence of lymphadenopathy in abdomen and pelvis.
2. Routine Stool test (29th Feb 2020)-Vegetative cells and Bacilli present (+), mucus ++; No blood, no reducing sugar.
3. Complete blood profile- Hb=14.7gm%; TLC=8000/cmm; DLC=N54 L41 E0 M4 B0 mild lymphocytosis; Platelets=351000/cmm.

Table 4: Ayurvedic Regimen

| Day        | Complaints                                                                 | Medication                                                                 |
|------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|
| On 1st visit (29.2.20) | Motion frequency-10/day (1 motion with fecal matter and rest motion only mucus), Abdominal Pain, Anorexia, Weakness and Weight loss | 1-Ajmodadi churna 13 2 grams before food twice in a day with lukewarm water. |
|            |                                                                            | 2-Panchamrut parparati 12 125mg + Sanjivani vati 13 100mg + Muktashakti bhasma 13 125mg two times after food with honey |
|            |                                                                            | 3-Takrarista 11,12 15 ml two times with equal water all for 7 days |
| On 1st follow up | Motion frequency 4/day (all with fecal matter no visible mucus) Increase appetite, reduce weakness and no abdominal pain | 1-All of the above |
|            |                                                                            | 2-Kutaj ghan vati 13 1 tab three times for 7 days with lukewarm water. |
| On 2nd follow up | Motion frequency 1-2/day with normal consistency Appetite more increased, no weakness, weight gain present | Kutaj ghan vati 1 tab twice in a day for 7 days then stop |
|            |                                                                            | Bilwavaleh 12 1 tsp two times for 15 days then stop |

Diet restriction
- Dairy products like milk, paneer, cheese and excessive tea/coffee.
- Spicy and oily outside food, chicken, mutton etc.
- All types of preserved sauces like pizza sauce, schezwan sauce etc.
- Heavy to digested food like black gram, kidney bean, chickpea etc.
- Fermented food like bread, idli-dosa etc.

RESULT- In the present case treatment duration was near one month and it has been followed up weekly. The improvement in his sign and symptoms are as follows. (table-5)
The present case is a frequent episodes of the mentioned symptoms was there since last two years. In his previous food history he was frequently ingesting outside oily fried food and meat/chicken (3-4 days per week). So, here the cause of IBS is seen to be faulty food habits responsible for *Agni dusti* and *Agnimandya* which is responsible for *Graham dusti*. As per modern etiology it might be a case of post bacterial gastroenteritis induced IBS category B considering his food habits and stool test report. Similar concept has been mentioned in Ayurveda if diet restriction did not followed by *Atisara* patient, *Graham dusti* occur. There was no any history of social, academic or family related mental stress as commonly seen in adult IBS cases.

As the *Prakruti* of the patient was *Kapha vata pradhan* and *Pichhil mal pravrutti* was there along with *Agnimandya*, *Kaphaj graham* has been considered and *Ruksha, Agnideepan Tikta Rasa Pradhan Dravya* has been chosen for the treatment. The associated generalized symptoms and chronicity of disease *Laghana* and *Pachana* line of treatment has been taken. So, the treatment has been planned to start *Deepana, Ama-pachana* medicines like *Amodadi Churna* before meal and *Takrarista* having *Agnideepan, Gulma, Shotha, Udarrag-har* properties followed by *Lasayana* formulations like *Bilwaleh* indicated in *Jirna pravahika* and *Shoolyukta atisar* as mentioned in *Samhitas*. *Takka* is best for *Graham rogue* having *Madhur vipaki, Ushna virya, Rukha guna pradhan*, *Vatakapha shamak* without *Pitta prakop* and mainly indicated in *Kaphaj graham*). This is act as natural probiotics as indicated in the treatment of IBS in modern science. *Sanjivani vati* has been added along with *Panchamrut Parpati*, indicated in *Aruchi, Mandagni, jirna atisara*, *Graham* along with *Shoottik bhasma* best for *Kosthagatvata*. At first follow up *Pichhil mala Pravrutti* and number of *Malapavrutti* reduced then *Kutaj ghan vati* also added considering its *Grahi* effect and *Jirnavastha* in the previous prescription.

Along with above medication strict diet regimen was advised to get early result because diet restriction is very important in IBS. Mainly food quantity and variety gradually added as per *Agni pradeepti*. The complete *Upshama* has been seen in 5-6 weeks.

**DISCUSSION**

In the present case the frequent episodes of the mentioned symptoms was there since last two years. In his previous food history he was frequently ingesting outside oily fried food and meat/chicken (3-4 days per week). So, here the cause of IBS is seen to be faulty food habits responsible for *Agni dusti* and *Agnimandya* which is responsible for *Graham dusti*. As per modern etiology it might be a case of post bacterial gastroenteritis induced IBS category B considering his food habits and stool test report. Similar concept has been mentioned in Ayurveda if diet restriction did not followed by *Atisara* patient, *Graham dusti* occur. There was no any history of social, academic or family related mental stress as commonly seen in adult IBS cases.

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**Table 1**

| Abdominal pain                  | Present and not relieved after motion | Not present | Not present |
|---------------------------------|--------------------------------------|-------------|-------------|
| Weakness                        | Present                               | Reduced     | Absent      |
| Appetite                        | Low                                  | improved    | Normal      |
| Weight loss                     | Present                               | No weight loss | No weight loss |
| Weight (kg)                     | 38.3 kg (reduced from 40.5 kg)        | 38.6 kg     | 39.1 kg     |

*The motion frequency as well as consistency gradually improved with the Ayurvedic medicines along with associated symptoms like abdominal pain, anorexia etc. visible weight gain was also present on the last follow-up.*

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