ISSN : 2350-0743

International Journal of Recent Advances in Multidisciplinary Research

Vol. 11, Issue 03, pp.9597-9599, March, 2024

RESEARCH ARTICLE

SECONDARY LACTOSE INTOLERANCE - AN AYURVEDIC CASE STUDY

***[1]Dr. Arun, B. and [2]Dr. Dhanya, P.**

[1]Assistant Professor. Department of Kaumarabhritya, Vaidyaratnam Ayurveda College, Thaikattussery, Ollur, District Thrissur, State Kerala, India; [2]House surgeon 2023-2024, Vaidyaratnam Ayurveda College, Thaikattussery, Ollur, District Thrissur, State Kerala, India

ARTICLE INFO

Article History

Received 14th December, 2023
Received in revised form
26th January, 2024
Accepted 07th February, 2024
Published online 29th March, 2024

Keywords

Lactose intolerance, Pittaja sthanyadushti, Pittaja athisara.

ABSTRACT

Lactose intolerance is one of the common clinical condition dealt in pediatrics. Most commonly the child present with abdominal pain and bloating, diarrhea, nausea and flatulence upon consuming food substances containing lactose. In most cases symptomatic management and avoidance of lactose containing food is taken as a solution. Main clinical findings and Diagnosis: In this case, a 5 month old baby was presented with passing watery stools upon intake of breast milk. The symptoms resolved on stopping breast milk and she was given cerelac, as substitute for breast milk. The baby had history of fever and it was managed by course of antibiotic treatment at the age 4 months. Reducing sugar was present in laboratory stool examination. Since the baby had no complaints towards breast milk from birth, but was developed in later life, this is considered as a case of lactose intolerance due to secondary lactase deficiency. The condition was taken and managed by ayurveda as per 'pittaja sthanyadushti' and 'pittaja atisara' chikitsa. No stoppage of breastfeeding was adviced. After 12 days of treatment, the baby had considerable relief. Frequency of diarrhea reduced and also consistency changed from watery stools to semi solid nature.

Citation: Dr. Arun, B. and Dr. Dhanya, P. 2024. *"Secondary lactose intolerance - An Ayurvedic Case Study", International Journal of Recent Advances in Multidisciplinary Research,* 11, (03), 9597-9599.

INTRODUCTION

Breast milk is proposed as a major source of nutrition for the first 6 months of an infant. It plays considerable role in providing immunity to the baby and also strengthens mother - child bonding. Acharya Vagbhata states that mother's milk itself is sufficient for the development of child. No specific time period has been mentioned for exclusive breast feeding. It has been told that after eruptions of the teeth, the baby should be taken away from the breast slowly (over long periods). Human breast milk contain water, fats, proteins, carbohydrates (lactose) etc. Some children are intolerant to Lactose. Lactose intolerance is defined as a clinical syndrome that manifests with characteristic signs and symptoms upon consuming food substances containing lactose. It presents with abdominal bloating and pain, loose stools, nausea, flatulence and borborygmi sounds. Disease severity varies among individuals. Human population, especially those of South American, Asian, and African descent tend to develop lactase deficiency. People of Northern Europe origin or Northwestern India has less incidence of lactose intolerance. According to Times of India.com latest update, 60% of Indians suffer from lactose intolerance and may don't even realise it.

Normally upon lactose consumption it is hydrolysed into glucose and galactose by lactase enzyme found in the small intestinal brush border. But in case of lactose intolerance, there occurs deficiency of lactase enzyme. The deficiency are due to either primary or secondary causes, which results in clinical symptoms. Primary, secondary, congenital and developmental are the four leading cause of lactase deficiency. Primary lactase deficiency is the most common cause of lactase deficiency. In primary lactase deficiency, enzyme activity begins to decline in infancy. Due to several infections, inflammatory or other causes, injury to intestinal mucosa can cause secondary lactase deficiency. Common causes include gastroenteritis, celiac disease, crohn's disease, ulcerative colitis, chemotherapy and antibiotics. Here we are reporting a case of pittaja athisara, due to paithika sthanyadushti , in a 6 months old baby who was completely restricted from breast milk consumption following attacks of severe diarrhea. By our treatment, baby got relieved from diarrhea and is consuming breast milk.

Patient information: A full term normal vaginal delivered (FTNVD) second female child born to a NCM parents with birthweight of 3.786 kg, presented with complains of passing watery stools, at a frequency 5-6 times per day, yellow to yellowish green colored since 5 months of age. The symptoms set aside on stopping breastmilk and reappear on consuming it. Diarrhea is not associated with abdominal cramps, fever and skin manifestations. There is no history of recent weight loss.

****Corresponding Author:*** **Dr. Arun, B.**
Assistant Professor. Department of Kaumarabhritya, Vaidyaratnam Ayurveda College, Thaikattussery, Ollur, District Thrissur, State Kerala, India

History of past illness: At 4 months of age the child had a history of fever, which has managed by antibiotics. Following fever, she developed constipation also.

Treatment history: Child was given allopathic medication and IP management for present illness. Mother was advised to stop breastfeeding and use cerolac as substitute.

Birth history

- **Antenatal -** The first child of mother is now 2 years and 6 months old. During gestation of first child, mother had gestational diabetes mellitus (GDM) and was on medication (insulin injection) from 5th month till delivery. During the gestational period of second child initially mother had no complaints. Glucose tolerance test (GTT) was normal. Later, on feeling fatigue she used to check her blood sugar levels using glucometer, results showed variables of reduced sugar levels (50 mg/dL range). In 8th month scanning, baby had increased weight gain.
- Natal - FTNVD. Delivery occurred on 9th month (31/03/2023) with birthweight 3.780 kg. *Cry:* was delayed. Baby had reduced sugar level. Mother was advised to feed the baby frequently.
- Neonatal - NNJ was observed on 3rd day, phototherapy was done and then discharged after 1 week of delivery.

Diet history*:* Breast feeding had started soon after delivery. Upon manifestation of diarrhea breastfeeding was stopped at 5th month. Cerelac was used as substitute. But the child is reluctant to eat cerolac.

Weaning- since 5th month.
Present food: Breast milk and semisolid food.

Family history: Mother and father had no history of lactose intolerance.

Social history: Middle class.

Immunization history: Immunised till date.

Personal history:

Diet - Exclusive breastfeeding
Appetite - satisfactory
Bowel - passing watery stools yellow to yellowish green at a frequency of 5-6 times/day.
Micturition: passing clear urine 5-6 times /day.
Sleep: Normal 8-9 hours of sleep.

General examination: Appropriate for gestational age with adequate nutritional status.

Systemic examination

Alimentary system:
Inspection: oral mucosa is normal pinkish coloured. No mouth ulcers. Tounge is not dry. No scars and signs of herniation.
Palpation: No tenderness
Auscultation: peristaltic sounds heard.
Other system appears normal.

Clinical Findings

The child was passing watery stools, since 5 months of age, which was yellowish for first 2 - 3 days, then turned yellowish green. Stools were frothy, with a frequency of 5-6 times/day. Baby had reddish discoloration in perianal area. Stools were not mixed with blood. She was not having a history of weight loss recently. Before developing diarrhoea, there was a history of passing tight stools for a period of 1 month (at 4th month of age). She also had a history of fever at the age of 4th month of age and it was managed with antipyretics and antibiotics. In ayurveda, according to Ashtangahrudaya nidana sthana (Atisara-Grahani nidana) the symptoms of this baby can be correlated with Pittaja atisara lakshana. The disease started with Poorvarupa manifestation of atisara - 'malagraha' (constipation), followed by symptoms such as 'peetam - haridram - shadwalaprabam' (passing of yellowish or turmeric like deep yellow or algae like green colored stools) and 'payusanthapapakavan' (burning sensation and ulceration in perianal area).

Timeline

Passing hard consistency stools	July 2023
Passing foamy watery stools, yellow-green colored, frequency 5-6 times/day. Underwent allopathic Ip management. Adviced to completely stop breastfeeding.	August 2023 (19/08/2023)
First consultation in our OPD. Diagnosis: Pittaja atisara. Internal medications for mother- 1.Dadimastaka churna (½ tsp in buttermilk, twice daily). 2.Guducyadi kasayam tablet (2-2-2, ½ hr before food). Internal medications for child- 1.Gopichandanadi gulika (¼ tab with honey, twice daily after food.) 2. 5 drops of dadimastaka curna + buttermilk twice daily. Adviced to continue breast feeding.	September 2023 (19/09/2023)
Came for review. Condition improved. Consistency of stool changed - passing semisolid stools with a frequency of 3 times per day.	31/09/2023

Diagnostic assessment: Stool routine examination was done. Laboratory report of stool routine examination dated 19/08/2023 showed stool reducing sugar - yellow, presence of pus cells (many), RBC (few), EH cyst and undigested matters. Stool Ph was 7.0. Laboratory report of routine stool examination dated 23/08/2023 also shows presence of puscells (few), RBC (few) EH cyst, fat globules, yeast cells and undigested matters. Test report dated 30/08/2023 shows stool reducing sugar–green, presence of pus cells (many), RBC (few) and fat globules.

Therapeutic intervention: On 19/09/2023 baby was brought to OPD and was administered with gopichandanadi gulika in a Dosage of ¼ tablet with honey, twice daily, after feeding. Her mother was advised with dadimastaka churna (½ teaspoon powder mixed in ½ glass of buttermilk [anamla takra]), twice daily. 5 drops of this is given to the baby twice daily after feeding. Guluchyadi kasayam tablets was given to the mother, 2 tablets thrice daily, half an hour before food.

Follow up and outcome: Mother and baby had medicine according to the advice of consultant. Pitta prakopa and dushti Kara ahara viharas were avoided (eg: intake of katu, amla pradhana ahara, virudhanna, fried foods etc). Adviced to continue breast feeding. In visit after 12 days (on31/09/2023), there was relief of symptoms. Now the frequency of diarrhea had changed from 5-6 times to 3-4 times. According to Bristol stool chart scale, stools were of type 7 (Liquid consistency with no solid pieces -severe diarrhea). Now it is of type 4 (Like a smooth,soft sausage or snake).

DISCUSSION

The case described here had features of pittaja atisara. A samprapthi can be stated to the development of the disease - Mother had a pittaja sthanya dushti and also child suffered fever at first this might have disturbed her agni, causing mandagni followed by manifestation of athisara. As a poorvaroopa she developed 'malagraha' then 'peeta-haridra shadwalaprabha purisha' and 'payusanthapapaka'.The condition can be compared with lactose intolerance. But as the child was disease free with the same breast milk during the initial 4 months of life, it is suspected to be a lactose intolerance due to secondary lactase deficiency, happening as a sequel of previous infection. Due to several infections ,or other diseases injury to intestinal mucosa can cause secondary lactase deficiency. Common causes include gastroenteritis, celiac disease, crohn's disease, ulcerative colitis, chemotherapy and antibiotics. The child had a history of fever before manifestation of diarrhea and also she was under antibiotic treatment for a considerable duration (7days).This might have influenced her gut biology and lead to manifestation of symptoms. Also the child has positive reducing sugar in stools. Reducing sugar positive means there are reducing sugars in the stool that have not been absorbed by the body. A high level of reducing substance in the stool suggests the presence of conditions like lactase deficiency (most commonly). So the condition can be diagnosed as lactose intolerance due to secondary lactase deficiency. The case can be treated to cure combining the treatment for pittaja stanyadushti, pittadhika atisara and grahani. As the child was mainly dependent on mother's milk, it can be assumed that the cause come from mother. In a child, who is on exclusive breast milk, we cannot advice them to completely stop breast feeding.lt would lead health problems in future (especially concerning immunity) and also adversely effect mother- child bond. Dadimastaka churna (mentioned in ashtanga hrudaya) was given to mother and child. Guluchyadi kasaya was also selected, as it is pittahara and correct mandagni. Gopichandanadi gulika is administered intended to correct 'grahani' and cure any persisting infections (Jwara).

Financial support and sponsorship: Nil.

Conflicts of interest: There are no conflicts of interest.

Declaration of patient Consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the parent have given consent for his/ her/ their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

REFERENCES

Dr. Dinesh K.S. - Kaumarabhrtya updated (Notes on Kaumarabhrtya- Based on B.A.M.S Syllabus - published by Chaukhambha publications.

Dr.T.Sreekumar, English translation and commentary of Vagbhata's Ashtangahrdaya: Sutrasthana - Principles of Ayurveda explained in dextrous verse- 5th Edition, published by Harisree Publications.

Prof. K. R. Srikantha Murthy - Text, English translation, Notes, Appendix and Indices of Vagbhata's Astanga hrdayam; Volume II (Nidana, Chikitsa and Kalpasiddhi sthana) - Published by Chowkhamba krishnadas academy - Nidanasthana Chapter 8 sloka 4b-5b & 8-9a pageno:78; Chikitasasthana Chapter 9 sloka 113b-115, pageno:352.

Prof. K. R. Srikantha Murthy - Text, English translation, Notes, Appendix and Indices of Vagbhata's Astanga hrdayam; Volume III (Uttarasthana) - Published by Chowkhamba krishnadas academy - Nidanasthana

Talia F. Malik, Kiran K. Panuganti - Lactose intolerance Statpearls, NCBI bookshelf - Education activity - Source: https://www.ncbi.nlm.nih.gov

****