

LITERATURE REVIEW ON VIBANDHA W.S.R TO FUNCTIONAL CONSTIPATION IN CHILDREN ACCORDING TO AYURVEDA

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ABSTRACT

Vibandha/Baddapuresha refers to an obstruction in the flow of feces, which may arise from functional or structural causes. Vibandha (constipation) has been referenced in several sources. In illnesses such as Udavarta, it presents as an independent entity, whereas in ailments like Kasa and Shwasa, it significantly contributes to the development of Samprapti. Vibandha, as an independent concept, has not been delineated in any prominent Ayurvedic texts. Its characteristics encompass the expulsion of a little volume of feces with difficulty or the elimination of a substantial volume of watery stool accompanied by sound and discomfort. The contemporary period, characterized by a fast-paced and demanding lifestyle, often drives individuals towards irregular and detrimental behaviors concerning diet, behavior, and excretion, resulting in various issues such as constipation, indigestion, and obesity. Vibandha is induced not only by the impurity of Pureeshavahasrotho but also by the dysfunction of Apanavata in

conjunction with Agnimandya. Agni is responsible for the production of Pakwa Mala, while Agnimandya is regarded as the primary cause of Vibandha. Consequently, Agni assumes a pivotal role in Vibandha.

KEYWORDS: Vibandha, Apanavata Vaigunya, Agnimandya, functional constipation, GI disorder, pathya-apathya ahara-vihara.

INTRODUCTION

Constipation is a frequent gastrointestinal condition that can greatly impact quality of life and healthcare expenses. The frequency of defecation is contingent upon the child's age. During the newborn era and early infancy, feces may exceed four times daily, subsequently diminishing to one to two times per day. By the age of 4, 98% had achieved voluntary sphincter control. The majority of individuals experience a minimum of three bowel motions weekly. Nevertheless, infrequent stool passage alone is not the exclusive criterion for diagnosing constipation. Numerous individuals with constipation may exhibit a normal defecation frequency yet experience excessive straining, hard stools, lower abdominal fullness, or a sensation of incomplete evacuation. It occurs in all pediatric age groups, from infancy to young adulthood. The predominant cause of constipation is functional in nature. It accounts for about 90 percent of constipation cases in healthy children. Currently, functional constipation is more common in individuals under 15 years of age, with prevalence rates in childhood ranging from 0.7% to 29.6%. It consists of approximately 3% general pediatric outside visits and about 30% visits to pediatric gastroenterologists. Constipation is associated with vibandha in Ayurveda. The Ayurvedic samhitas do not explicitly define the condition known as vibandha. In the majority of annavaha and purishvaha srotovikriti, it is observed as a symptom. Vibandha is a complication of Vamana and Virechana. Vibandh is a sign of parikartika (anal fissure), a side effect of sansodhan (Vamana or Virechana) in Ajirna. It is a complication of acute hemostasis in Raktarsha (hemorrhoids) and an apatarpanjanya roga (diseases caused by nutritional inadequacies). In Ayurveda, the term "vibandh" is derived from "vi" and "bandha," signifying the binding of stool. Constipation is characterized by a delay in stool passage or difficulty in defecation lasting two or more weeks, resulting in significant distress for the patient. Constipation can be classified as either functional or organic. Functional constipation, also referred to as idiopathic constipation or fecal withholding. It can be distinguished based on historical context and physical examination. Functional constipation typically commences following the newborn phase. Children may actively or subconsciously withhold feces, and acute bouts can arise from nutritional changes, such as transitioning from human milk to cow's milk, as the fat in cow's milk is more challenging for newborns to digest compared to maternal milk. Constipation can be defined and diagnosed according to the Rome criteria. Three requirements for infants and toddlers include less than two defecations per week and one or more bouts of incontinence. The sign of painful or difficult bowel movements indicative of constipation can be diagnosed with a thorough medical history assessment.

Vibandha/Baddapureesha refers to an obstruction in the passage of feces, known as Sanga. This condition may arise from either functional or structural causes, termed Sanniruddha Guda in classical texts, and may necessitate surgical intervention. Functionally, Sanga signifies the condition of Srotodusti, particularly Pureeshavaha Srothodusti. Its characteristics encompass the expulsion of a little volume of feces with difficulty or the elimination of a substantial volume of watery stool accompanied by noise and discomfort. The contemporary period, characterized by a fast-paced and demanding lifestyle, often drives individuals towards irregular and detrimental behaviors concerning diet, behavior, and excretion, resulting in various issues such as constipation, indigestion, and obesity. Vibandha is not just attributable to the impurity of Pureeshavahasrotho; it may also arise from the dysfunction of Apanavata in conjunction with Agnimandya. Agnimandya is regarded as the primary cause of Vibandha, as Agni is responsible for the development of Pakwa Mala. Consequently, Agni assumes a pivotal role in Vibandha.

Vibandha/Baddapureesha refers to an impediment in the transit of feces, known as Sanga, which may arise from either functional or structural causes, termed Sanniruddha Guda in classical texts, potentially necessitating surgical intervention. Functionally, Sanga signifies the condition of Srotodusti, particularly Pureeshavaha Srothodusti. Its characteristics encompass the expulsion of a little volume of feces with difficulty or the elimination of a substantial volume of watery stool accompanied by sound and discomfort. The contemporary period, characterized by a fast-paced and demanding lifestyle, often drives individuals towards irregular and detrimental behaviors concerning diet, behavior, and excretion, resulting in various issues such as constipation, indigestion, and obesity. Vibandha is not solely attributed to Pureeshavahasrotho Dusti; it may also arise from Apanavata Vaigunya in conjunction with Agnimandya. Agnimandya is regarded as the primary cause of Vibandha, as Agni is responsible for the development of Pakwa Mala. Therefore, Agni plays a crucial part in Vibandha.^[1]

AIM

- To study in details Literature review on vibandha w.s.r to functional constipation in children.
- To review the behavioral causes and neurological involvement of constipation through modern science.
- To review the management of constipation through ayurveda.

MATERIAL AND METHODS

This research is based on an examination of Ayurvedic texts. Materials concerning Vibandha, constipation, and their interrelation have been assembled. This review examined the Charak Samhita, Susruta Samhita, other significant Ayurvedic literature, contemporary textbooks, publications, and journals. The term Vibandha appears in numerous classics as Nidana, Purvaroop, Roopa, and Upadrva of different ailments, as well as the Vyapath of Panchakarma procedures. There are scattered references concerning several Ahara Dravyas that induce and alleviate Vibandha in diverse contexts.

Nirukti

Vi- The word vi is the Upasarga

Bandha- The word Bandha means Band Bandhne.^[2]

Vyutpatti

- Vibandhati Malas Vi + Bandha- Ach (Vachaspathyam)
- Malabandhakarake Rogabhede (Amarakosha)

Paryaya

Vidsanga, Varchagraha, Shakritgraha Puresha Rodhaha, Malagraha- Malanam Mutrapureeshadeenam, Graho, Baddha shakri, Mala baddha, Gada varchas.^[3,4]

Vibandha^[5]

- Udgaara Nigraha
- Hikka Swasa Nidana
- Vamana Ayoga Lakshana
- Vidavruta Vata
- Visuchika Lakshana
- Ajeerna Lakshana
- Jwara Lakshana
- Netra Basti Vyapat
- Basti Vyapat
- Madatyaya Lakshana
- Vatavyadhi
- Vamana Virechana Vyapat

Vibandhagnam^[6]

- Jambira
- Draksha

Vibandhahara

- Sheeta Rasa
- Varuni

DISCUSSION**Nidana^[7]**

Classical texts do not have a direct reference to the Nidana of Vibandha. According to Doshapradhanyatha and Lakshanas, Vibandha can be classified as a Vatapradhana Vyadhi and regarded as a Pakwashaya Vyadhi. Therefore, the elements that disrupt the normalcy of Apanavata, Agni, and Nidana, as outlined under Pureeshavaha Srotodusti, can be regarded as Nidana for Vibandha.^[8]

Roopa

Rupa is merely a significant Vyadhi Bodhaka Hetu within the Nidana Panchaka for comprehending and elucidating sickness. It provides information about the involvement of Dosha, Dushya, and their severity. The Purishavegadharana is regarded as the Nidana for Vibandha, hence its Lakshanas can be deemed as Vibandha Lakshana. Vibandha may also be regarded as a manifestation of Udavarta. All Acharyas identify pain in various regions of the body, particularly the thorax and belly, as a sign of Udavarta. Subsequently, as a result of the Vimargagamana of Vata, symptoms of the gastrointestinal tract, such as Adhmana, Hrilasa, and Avipaka, manifest. This condition results in constipation. Constipation is characterized by straining during defecation, the absence or delay of stool passage, and the expulsion of stool that is dry, hard, cold, or in insufficient quantity.^[9]

Pureesha nigraha Lakshana	Charaka Samhita	Astanga Hridaya
<i>Pakvashaya Shola</i>	+	-
<i>Pindikodveshtana</i>	+	+
<i>Shirashoola</i>	+	+
<i>Adhmana</i>	+	-
<i>Vatavarcho Apravritti</i>	+	-
<i>Parikartika</i>	-	+
<i>Hridayasyoparodha</i>	-	+
<i>Urdhwavayu</i>	-	+
<i>Pratishyaya</i>	-	+

Samprapti^[10]

The physiological alterations occurring from the onset of etiological variables to the emergence of symptoms are referred to as Samprapti. When the Dosha, Dhatu, and Mala are in a condition of equilibrium, sickness does not occur. When Nidana disrupts this equilibrium, sickness will arise.

Samprapthi ghataka

- Dosha- Vata Pradhana Tridosha
- Dushya - Rasa, Pureesha
- Srotas - Annavaha, Pureeshavaha
- Srotodushti - Sanga
- Agni - Jataragni
- Ama - Jataragnimandya Janya Ama
- Adhithana - Pakvashaya
- Rogamarga – Abhyantara
- Udbhava stana - Amashaya, Pakvashaya
- Vyaktasthana – Koshta.

Upadrava

Nishwasita (expires excessively) or faints

- Trushyati (becomes thirsty excessively)
- Hikka (hiccups)

Pathophysiology

Functional constipation may arise from situational psychological factors, developmental difficulties, and nutritional influences. Ayurveda identifies the primary causes of constipation as Purishaja Vegadharana (the retention of stool, exacerbated by children's excessive use of devices such as smartphones and televisions, leading to neglect of hygiene practices), Akal or ashmay purish tyag, insufficient water intake, inadequate consumption of fiber-rich foods, and the prevalence of fast food, often made from maize flour, such as pizza, burgers, and momos.

Anal stenosis, also known as Sanniruddha Guda, is associated with the consumption of Kashaya rasa predominant milk and the intake of Vata-damaged substances, along with additional factors such as anterior ectopic anus. Distressing perianal disorders (abscess,

fissure, hemorrhoid), neuromuscular condition Hirschsprung's illness, neuronal intestinal dysplasia. Metabolic or endocrine abnormalities—hypothyroidism, hypercalcemia, hypokalemia, diabetes mellitus, and vitamin D intoxication—also contribute to constipation.

Purishaja krimi- Krimi also results in vibandha, including pinworms, roundworms, and detrimental yeast infections like Candida. As many as 30% of children develop constipation, a condition particularly common among those with autism spectrum disorders. Constipation is defined by infrequent, difficult bowel movements. The digestive process commences immediately after food is ingested, traveling from the mouth to the stomach, where it is broken down and thereafter moves to the small intestine, where all beneficial nutrients (Ahara rasa) are absorbed. Food may remain in the small intestine for as long as 4 hours, during which it undergoes transformation into a dilute, aqueous mixture. Nutrients from meals can transfer from the intestine into the bloodstream at the conclusion of the process, rendering it a worthwhile endeavor. Once the complex carbohydrates, vitamins, proteins, and calcium in milk enter the bloodstream, the body is more predisposed to utilize them effectively. The chyme reaches the large intestine in a liquid form, where water is absorbed. Subsequently, the solid waste moves to the rectum for excretion, occasionally influenced by abnormalities. Excessive absorption of water by Apan Vata and Pachak Pitta results in hard and unpleasant stools. Consequently, the child apprehensively resolves to refrain from defecation; such children react to the urge by contracting their external anal sphincter and gluteal muscles. This attempt to withhold stool results in prolonged fecal stasis in the rectum, leading to fluid absorption and the formation of harder stools. Children currently allocate excessive time to playing on their phones or seeing cartoons on television, which hinders their eating habits and adversely impacts their digestion, leading to a predominance of rapid food consumption (apathya ahara). Constipation is regarded as a problem resulting from an imbalance in the gut-brain axis and disruption of the enteric nerve system (ENS). The ENS function and symptoms of constipation are both intricately linked to gut flora simultaneously. The urge to defecate is initiated by the colon, which also transports feces to the rectum. The puborectalis muscle and external anal sphincter relax to facilitate the expulsion of feces from the rectum. The Valsalva maneuver and abdominal muscle contraction are employed to elevate intra-abdominal pressure and expedite fecal ejection. Rectal afferent nerves are responsible for generating the sensation of fullness in the rectum and the compulsion to defecate. The muscles essential for defecation are innervated by sacral nerves S2-S4 via the pudendal nerve.

Chikitsa Sutra

In addressing the pathology of Vibandha, the primary therapy approach should involve Agni Deepana and Vatanulomana. Apana Vata is the primary factor contributing to Vibandha, which is a symptom of Udavarta; hence, the Udavarta treatment protocol may be implemented. The choice of treatment is contingent upon Rogabala, Rogibala, Kala, Vaya, Agni, Aushadha, among other factors.^[11]

General Management

1. Nidana Parivarjana: Mithya Aahara and Vihara are primary contributors to Vibandha; hence, the avoidance of Nidana should be the principal approach to treatment. The Nidanas of Vibandha mostly encompass Vegavarodha, and the excessive consumption of Katu, Tikta, Kashaya, among others. Nidana Parivarjana pertains to the patient's discipline and demeanor; hence, the Vaidya must educate patients regarding their dietary regimen. The dietary regimen entails adherence to Ashtavidha Ahara Ayatana and Dwadasha Asana Pravichara.

2. Shamana Chikitsa: Shamana Chikitsa is employed when an imbalanced Dosha leads to a minor condition. Both internal and exterior treatments are employed to rectify the Dosha imbalance. This is predicated on the concept of Guna. Primarily, medications exhibiting Madhura Kashaya amla rasa, Ushna, Tikshna, Sukshma, Vyavayi, Vikasi Guna, and Madhura Vipaka will be advantageous.

3. Shodhana Chikitsa

- a. Snehana
- b. Swedana
- c. Virechana
- d. Anuvasana Basti
- e. Niruha Basti
- f. Varti

a. Snehana

Vibandha is a Vata Pradhana Vyadhi and Snehana is the best line of treatment for Vata Shamana. Both Bahya and Abhyantara Snehana can be adopted in Vibandha.

b. Swedana

After Snehana, Swedana procedure is done which helps in Asanna Gamana of Doshas from Shakha to Kosta. Helps in Srotoshodhana.

c. Virechana

Virechana is one of the Panchakarma therapies that eliminates Dosha from the lower gastrointestinal tract. The Shodhana technique expels Pakva and Apakva Malas from the body via Guda Marga. The Virechana Dravya predominantly possess Ushna Veerya, characterized by Guru, Teekshna, Sukshma, Vyavayi, and Vikasi Guna. Virechana Dravya exhibits a predominance of Parthiva and Jala Mahabhuta, and due to their Guru Guna, they can induce Adhogami Prabhava and facilitate the downward migration of the Doshas.

d. Anuvasana Basti

Occasionally, after alleviation from Udavarta, the retention of flatus and feces persists due to excessive unctuousness; hence, the child should receive an Anuvasana type of medicated enema. Vata anulomaka Taila or Ghrita, Anuvasana Basti can be administered mostly for Koshta Snehana, Vatanulomaka, and alleviating Pureesha Rookshata.

e. Niruha Basti

This Niruha kind of medicated enema promptly alleviates the retention of urine, feces, and gas, while facilitating the regular operation of the rectum and associated veins. If the Varti is ineffective, the infant should receive Snehana, Swedana, followed by Niruha enemas. Vibandha is typically induced by the exacerbated Vayu. This exacerbates Vayu, occasionally inciting the aggravation of Pitta and Kapha. Consequently, medicated enemas for the three exacerbated doshas responsible for Udavarta should include sour and alkaline substances with oil for excessive Vayu, milk for excessive Pitta, and cow's pee for excessive Kapha.

Management As per Alternative Science^[12]**Non-pharmacological Treatment Education**

This is the initial stage in the management of functional constipation. Parents and caregivers should get education about functionality. Constipation is a significant condition that requires treatment; the affected child should also be informed, if sufficiently mature, about this medical issue and its management. By elucidating the physiology of functional constipation, family physicians can assist parents and caregivers in comprehending the reasons behind the child's inability to achieve bowel movements of normal caliber and regularity. The child's

apprehension of a painful bowel movement is the predominant motivating element for fecal retention. Fecal retention is rarely an antagonistic behavior.

Toilet Training, Reward System, and Defecation Diary

Given that the retention of feces in the rectum might perpetuate constipation, it is essential to clear the rectum regularly. In youngsters with a developmental age of four years or older, this can be achieved by implementing a toilet-training program. Toilet training entails sitting on the toilet for five minutes following each meal to actively attempt defecation. By utilizing the gastrocolic reflex, the patient enhances colonic peristalsis through postprandial toilet visits, hence aiding defecation. The significance of a relaxed posture during defecation must be elucidated. To maintain a comfortable posture, foot support (via a footstool) is necessary for youngsters whose feet do not reach the floor while seated on the toilet. To incentivize a child for toilet training, a reward system may be implemented, wherein minor gifts (e.g., stickers) are awarded for successful completion of the program. A daily stool diary can objectively assess the bowel patterns of children with functional constipation; it also serves a motivational purpose and is an effective tool for evaluating treatment efficacy.

Dietary Modification

A balanced diet with whole grains, fruits, and vegetables is advised as a treatment for constipation in children. The initial management approach for simple primary constipation is ensuring sufficient dietary fiber, hydration consumption, and physical activity levels.

Behavioural Modifications

Approximately one-third of people with functional constipation have behavioral issues. A scheduled toileting routine that allocates time for feces is beneficial. Individuals with regular bowel movements often evacuate at a same time daily.

CONCLUSION

Vibandha is a disorder resulting from the disturbance of Vata Dosha, particularly Apana Vata, in conjunction with Agnimandya. Vibandha is not recognized as a distinct illness entity in the Ayurvedic texts, but is characterized as either a symptom or a complication associated with several ailments. Vata Prakopa Ahara and Vihara are the primary causes of Vibandha. This might be interpreted as inadequate dietary practices and lifestyle choices, along with persistent mental stress, leading to disruptions in Agni and Apanavata. Agnimandya and Apana Vata Dushti are consistently observed in the pathogenesis of Vibandha, accompanied

by dysfunction of Pachaka Pitta, Avalambaka Kapha, and Samana Vata. Early management, dietary adjustments such as fiber-rich foods, and appropriate toilet training alleviate constipation and avert subsequent difficulties. In Ayurveda, constipation can be treated with both therapies and medications. Children are sensitive; so, the treatment must be gentle, and the drug should be palatable and enticing. To prevent the recurrence of symptoms, parents should be educated about pathya and apathya ahara-vihara.

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