



Review Article

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A CONCEPTUAL STUDY ABOUT ETIOPATHOGENESIS OF VIBANDHA AND ROLE OF AYURVEDA IN ITS MANAGEMENT: A REVIEW

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ABSTRACT

Constipation is a condition characterized by infrequent bowel movements resulting in the passage of small amounts of hard and dry stool. This is brought about by numerous causative factors amongst them three major causes which include dietary, mental and lifestyle factors. Constipation is characterized by unsatisfactory defecation that results from infrequent stools, difficult stool passage, or both. It significantly affects the quality of life, social functioning, and inability to perform activities of daily living individuals. A review that in spite of appropriate adjustment to these patterns and reassurance, patients often fail to relieve the problem of constipation. Hence there is a need for exploration a food-based, natural and drug-based convenient alternative for potential solutions to the problem of constipation, which includes lifestyle modification in early stage and by drug therapy assessing the dosha-dushya samurchana on which Ayurveda treatment depends. The present communication deals etiopathogenesis and management of vibandha (constipation) with its Ayurvedic perspectives.

Keywords: Vibandha, Etiopathogenesis, Quality of life, Ayurvedic management

INTRODUCTION

The main composition of body is Dosha, Dhatu and Mala¹. Vida or Varha or purisha (Stool) and Mutra (Urine) are the waste product of anna (food) i.e., consumed food formed at the end of the process of digestion and metabolism termed as malas. The waste products formed is removed from the body which is brought by process called excretion. If it remains for longer time in the body have tendency to vitiate the normal doshas by causing sroto sanga called vibandha (constipation) and any unwanted thing in the body can be considered as shalya causing pain due to obstruction in purisha vaha srotas. This is brought about by numerous causative factors; amongst them three major causes are dietary, mental and lifestyle factors. Vibandha (constipation) is not described as a separate disease entity. However symptoms of Udavarta (Retention of feces, flatus, urine) like Anaha (Obstruction), Admana (Distension), Malaavastamba (Hardness of faeces) due to the pratiloma gati (reverse flow) of Apana Vayu (one of the subtype of biological humor of Vata Dosha) is mimic the symptoms of vibandha².

Constipation is an acute or chronic condition characterized by dry and hard infrequent stools that are painful or difficult to pass. The pathophysiology of it is multifactorial and of patient's habits often reveals contributory and correctable causes, such as insufficient dietary roughage, lack of exercise, suppression of defecatory urges arising at inconvenient moments, inadequate time for full defecation and prolongs travel³. Hence the definition and causes of the disease hold the same in the contemporary science too.

Constipation on an average affects 20% of the population, 12 percent of men and 16 percent of women meet criteria for constipation⁴. Annually, constipation accounts for 2.5 million physician visits and 92,000 hospitalizations the prevalence of constipation is higher in women and in adults. It significantly

compromises the quality of life, social functioning, loss of work productivity i.e., ability to perform activities of daily living individuals. A review in spite of appropriate adjustment to these patterns and reassurance, the patients often fail to relieve the problem of constipation.

The "Rome III criteria & Bristol stool scale" are widely accepted format for diagnosis of Functional constipation⁴. Treatment of constipation is most often empirical and continues to evolve and remains challenging. Though the conventional treatment is well established in a recent survey of over 5000 patients who were taking medications for constipation, nearly one half of patients were unsatisfied with current modern therapy. Stimulant, osmotic and saline laxatives of chemical origin are known to cause abdominal cramping, hypokalemia, flatulence, abdominal distension, and alteration in electrolyte transportation which limit the long-term use of these drugs⁵.

Hence there is a need for exploration a food-based, natural and drug-based convenient alternative for potential solutions to the problem of constipation, which includes lifestyle modification in early stage and by drug therapy assessing the dosha-dushya samurchana on which Ayurveda treatment depends. The present communication deals etiopathogenesis and management of vibandha (constipation) with its Ayurvedic perspectives. This study is based on a review of Ayurvedic texts. Materials related to Vibandha, Constipation and their relation have been collected and compiled. The main Ayurvedic texts used in this study are Charaka Samhita, Sushruta Samhita and Sharangadhara Samhita.

CONSTIPATION

Constipation⁶ (also known as costiveness or dyschezia) refers to bowel movements that are infrequent or hard to pass. Constipation is a common cause of painful defecation.

It is defined (ROME II criteria & Bristol stool scale) as the presence of any two or more of the following symptoms for at least 3 months:

1. Infrequent passage of stool (3 bowel movements/week)
2. Hard stools
3. Straining at stool
4. Incomplete evacuation.

In India, the normal stool frequency is 1 per day in contrast to 3 per week.

Vibandha (Constipation) Vs Kostha

Bowels (Kostha) are three types- mridu (soft), krura (hard) and madhyama (medium)⁷. The soft bowels have an abundance of pitta and are purged even by milk; the hard bowels have the predominance of vata and kapha and are purged with difficulty while the medium bowels have balanced doshas and as such are moderate.

According to Acharya Sharangadhara, the individuals who have more pitta are of a mild type of alimentary canal (mridu koshta), those with more kapha are of medium type of alimentary canal

(Madhyama kostha) and people with more vata are graded as having wild-type of alimentary canal (krura kostha) and are constipated.

DESCRIPTION OF VIBANDHA (CONSTIPATION) IN AYURVEDA

Vibandha is vyapad of Vamana and Virechana. It is a side effect of sansodhan (Vamana or Virechana) in Ajirna, symptoms of parikartika (fissure in ano). It is apatarpanjanya roga (Diseases caused by nutritional deficiency), and one of the complications of immediate hemostasis in Raktarsha (bleeding piles)⁸.

Causes of Vibandha (Constipation)

A frequent functional cause of constipation is irregular bowel habits that have developed through a lifetime of inhibition of the normal defecation reflex⁹. According to Acharya Charaka, If one holds the urge for defecation it causes colic pain, headache, retention of feces and flatus, cramps in the calf muscles and distension of abdomen.

Table 1: Nidana

Sl.no	Hetu	Ahara	Viharaj	Vegadharana	Maansik
1	Ruksha	+	-	-	-
2	Guru	+	-	-	-
3	Vegavighata	-	-	+	-
4	Ativahanam	-	+	-	-
5	Atiyanayanama	-	+	-	-
6	Atyasanam	+	+	-	-
7	Atisthanam	-	+	-	-
8	Atichakramana	-	+	-	-

Table 2: Samprapti¹⁰

Hetu	Agnivaigunya - Amma formation - Malasanchaya - Vibandha
Dosha	Apana vayu
Srotas	Pureeshavaha srotas
Udbhava sthana	Pakvashaya
Vyakta sthana	Adhakaya

Table 3: Causes of Constipation

A. Gastrointestinal	B. Non-gastrointestinal
(1) Dietary	Drugs
Low fiber, Inadequate food	Opiates Calcium antagonists Iron Supplements Anticholinergics Aluminium containing antacids
(2) Motility	Neurologic
Slow transit Irritable bowel syndrome Drugs (given in non-gastrointestinal causes) Intestinal Obstruction and Pseudo-Obstruction	Multiple Sclerosis Parkinsonism Spinal Cord Disease C V A Autonomic neuropathy
3) Structural	(3) Metabolic /Endocrine
<ul style="list-style-type: none"> ● Colonic carcinoma ● Megacolon e.g., Congenital or acquired ● Diverticulosis of colon 	Diabetes mellitus Pregnancy Hypocalcaemia Amyloidosis Hypothyroidism
(4) Defecatory disorders	(4) Others
<ul style="list-style-type: none"> ● Obstructive ● Anorectal Disease e.g., fissure, piles. 	Schizophrenia Depression

TYPES OF CONSTIPATION

Constipation can be broadly classified into two types¹¹:

a) Casual or temporary: can be caused by indigestion, overeating, contaminated food or bacterial infection.

b) Chronic or habitual: Occurs largely in the elderly usually due to the loss of tonality in the sphincter muscles. It is also presented by persons suffering from piles or haemorrhoidal tissues.

Table 4: Presentation of Vibandha

Type of presentation of Purisha	Causes
Baddha Purisha	Ajirna Lakshan, Vistabdhajirna, Alaasaka, Pravridha Amavata Purishaja Anaha, Arsha Purvaroop, Vataj Arsha, Vataj Astila, Atisara Purvaroop, Vatadushtastanyapaanaj Balaroga, Gudagat Vata, Gulma Roga, Antarvega Jwara, Sannipataja Jwar Vataja Jwara, Kapha avrita Sa-amaan, Kosthashrita Vata, Kostha Vrana, Purishaja Krimi Pandu Ashadhya Lakshan, Paramad, Vataj Parinama shoola, Vataja Prameha Upadrav, Sannirudha, Kaphaja Shoola, Vataj Shoola, Mahashwasha, Baddhagudodar, Udar Roga Lakshana, Purishaja Udavarta, Vataj Udavarta, Kosta gata Vata, Pakvashayagat Vata, Vata vyadhi Upadrava, Vistabdhajirna
Ghan Purisha/ Grathit Purisha	Smgrahani Vataja Arsha
Sushka purisha	Udavarta, Vataj Grahani Dosha
Stoka Purisha	Vaataj Arsha

Table 5: Lakshanas of Vibandha¹²

Purisha nigraha		+
Pakwashaya shoiola	+	+
Pindikaodvestana	+	+
Shirashoola		+
Vatavarcha apravrutti	+	+
Adhamana	+	
Pratishaya	+	
Hrdavarodha	+	
Parikartika	+	

Diagnostic Criteria

Rome II criteria for Constipation

Two or more of the following for at least 12 weeks (not necessarily consecutive) in the preceding 12 months:

- 1) Straining during >25% of bowel movements
- 2) Lumpy or hard stools for >25% of bowel movements
- 3) Sensation of incomplete evacuation for >25% of bowel movements
- 4) Sensation of ano-rectal blockage for >25% of bowel movements
- 5) Manual maneuvers to facilitate >25% of bowel movements (e.g., digital evacuation or support of the pelvic floor)
- 6) <3 Bowel movements per week
- 7) Loose stools not present, and insufficient criteria for irritable bowel syndrome met¹²

Table 6: Bristol stool scale¹⁴ (starting three type of stools are considered as constipation)

Types	Pictures	Description	Present	Absent
Type 1		Separate hard lump, like nuts		
Type 2		Sausage-shaped But Lumpy		
Type 3		Like sausage but with cracks on its surface		
Type 4		Like sausage & Snake, smooth and soft		
Type 5		Soft blobs with clear-cut edges (passes easily)		
Type 6		Fluffy pieces with ragged edges, a mushy stool		
Type 7		Watery, No solid pieces		

Investigation

Digital rectal examination, evacuating proctoscopy and sigmoidoscopy are useful investigations to know the exact cause of constipation. Blood Biochemistry e.g. serum calcium and thyroid function tests. Colonic transit studies by radio-opaque markers help to distinguish slow transit constipation from normal transit constipation. If symptoms persist, then barium enema and colonoscopy should be carried out to look for the structural disease.

Treatment as per modern

The basic aim of treatment is to find out the cause and treat it.

1. Dietary adjustment: Fibre supplementation is the first line therapy for normal or slow transit constipation. Wheat bran is the most effective supplement followed by vegetables, fruits, mucilages, corn and cellulose. This adjustment is suitable for simple constipation and not for obstructive constipation and fecal impaction.

2. Behavioural therapy: Habit training is important to achieve regular defecation. The patient is advised to attempt defecation after meals when colonic motility is maximum. Once postprandial defecation is regular, the laxative is gradually withdrawn.

3. Drug Treatment: Laxatives and its type

Osmotic laxatives: It does soften of stool and increases the bowel movements by drawing water to the bowel thus help in overcoming occasional constipation.

Stimulant Laxatives: The use of stimulant causes the pushing of stool outside by its property of contractions of the intestine. Sudden bowel movement and discomfort and cramps are the common side effects seen.

Bulk-forming (fiber) laxatives: It should be taken with more quantity of water to avoid side effects and bloating, as it contains fibre which uses the water in your intestines helping in making stool bulkier.

Stool softeners: It is usually advised in a patient in whom straining should be avoided, it helps in softening dry and hard stools by increasing fluid in the stool.

Lubricant laxatives: It is usually given in patients having a blockage in rectum and anus, which helps the stool retain fluid and pass out without difficulty.

4. Surgery: In a condition of strictures and/or obstruction surgery is required as in Hirschsprung disease. Surgery may also be the choice of treatment in defecatory disorders with rectocele, intussusception, and rectal prolapse¹⁵.

LIMITATIONS OF MODERN TREATMENT

- Dependency- that is habit forming
- Worsens some symptoms- abdominal cramps, gas, bloating and pain
- Complications- diarrhea, hypovolemia and metabolic disturbances
- Diminished effect over time- become resistant to laxative by overuse

- Other adverse effects- interference to co concomitant drug absorption and structural changes in gut mucosa

ROLE OF AYURVEDA

In a nutshell, the management of constipation consists of elimination of etiological factors. Treatment of constipation which having cause to hold defecation urge is - fomentation, massage, tub bath, suppositories and enema should be given and one should take foods and drinks which are laxative in nature.

Rasa's role in stool evacuation

Owing to their unctuousness drugs and diets having sweet, sour and saline tastes are useful for the elimination of stool. On the other hand, drugs and diets having pungent, bitter, and astringent taste creates difficulty in elimination of stool. So, drugs and diets should be managed accordingly to rasa help to alleviates Vibandha (constipation).

In the treatment of Vibandha (constipation), purgation eliminates pitta. There are three types of virechana (purgation) ^{16,17,18}.

(1) Sukha Virechana (causing easy purgation) e.g; Trivrit (*Operculina turpethum*)

(2) mridu virechana (causing mild purgation) e.g; Aragvadh (*Cassia fistula*)

(3) Tikshna Virechana (causing strong purgation) e.g; Milk of snuhi (*Achyranthes aspera*)

Luke warm water is indicated in vibandha, If vayu is occluded by feces, then castor oil and oleation therapy as indicated for udavarta.

Vibandha is one of the Apatarpana janya roga and in its treatment, drinks prepared of roasted corn flour, alcohol, honey and sugar which help in the elimination of feces.

Types of laxatives in Ayurveda

Carminative- Haritaki (*Terminalia chebula*)

It will digest the undigested food residues by inducing or restoring normal peristaltic movement of the intestine by governing vata, it prevents the formation of gas or helps in expulsion of formed gas by combating flatulence.

Laxative- Aragvadh (*Cassia fistula*)

It hastens the elimination of undigested remains of food in the large intestine and colon by stimulating evacuation of the bowels by loosening and relaxation of bowels movements by acting on the intestinal wall, they increase the muscle contraction that moves along the stool mass.

Natural stimulant laxatives are senna, cascara sagrada.

Purgative- Katuki (*Picrorhiza kurroa*)

It is a strong laxative divided according to their nature into simple, drastic and saline purgatives, hydragogues encouraging the bowel movements by drawing water into the bowel from surrounding body tissues by softening the stool mass

Catheritics- Trivrit (*Operculina turpethum*)

This drug accelerates the defecation.

Mode of action of drug in constipation

Anulomana Drug: This drug helps in proper forming of excreta and also breaks the obstruction and brings them downwards is known as anulomana (aperients). Example- Haritaki (*Chebulic myrobalan*).

Bhedana: It breaks down either constipated fecal matter or the vitiated dosas and expels them out is known as bhedana (purgative) Example- katuki (*Picrorhiza kurroa*).

Rechana: The stool whether formed or unformed, is liquefied and expelled from the body by the action of a rechana (cathartic) drug as in the case of trivrt (*Operculina turpethum*).

Sramsana and Basti: The drug eliminates either pitta or kapha or both of them from the pitta ashaya (lower portion of the stomach and small intestine), kritamala (*Cassia fistula*) is the example for this. Basti eliminates all the three dosas present in the pakvashaya (colon). Administration of anuvasana basti when there are dryness and adhesion in the feces¹⁸.

According to **Maharshi Charak**, for purgation in the event of the vitiated doshas of the colon, the physician should prescribe Trivrit (*Operculina turpethum*), Haritaki (*Terminalia chebula*), Amalaki (*Emblia officinalis*), Bibhitaki (*Terminalia belerica*), danti (*Baliospermum montanum*), Nilini (*Indigofera tinctoria*), Saptala (*Acacia concinna*), vacha (*Acorus calamus*), Kampillaka (*Mallotusphilippinensis*), Gavakshi (*Citrullus colocynthis*), Kshirini (*Mimusops hexandra*), Udakiryaka (*Pongamia pinnata*), Pilu (*Salvadora persica*), Aragvadha (*Cassia fistula*), Draksha (*Vitis vinifera*), davanti (*Jatropha glandulifera*), Nichula (*Borringtonia acutangula*), Shatavaryadi Ghrita, Yavanishadav, Astashata arishta, Pippalyadi ghrita, Phalarishta, Dvitiya Phalarishta, Mustadi enema, Patala (*Stereospermum suaveolens*) for asthapanavasti (A variety of enema) in the treatment of Constipation etc. Vibandha (constipation) must be treated in the beginning by drugs that promote digestion. Administration of milk (boiled with trikantaka, bala, vyaghri, guda, and nagara) and Niruha basti is useful to remove malas (waste products)^{19, 20, 21}.

Pathya in Constipation

Sidhu (made of uncooked juice).

Phala varga: Matulunga (*Citrus medica*), jambira, Grape is laxative.

Shaka varga: Pushpa phala (Kushmanda), alabu, kalinda.

Harita varga: Plant that is use in salad form.

Ginger juice cures vibandha (Constipation).

Vatahara madira Sauvairaka and Tushudaka and sour kanji are laxative. Sauvarcala (black salt with smell) is light in digestion, alleviates constipation, Vibandha (Constipation) is instantaneously cured by the administration of Bhallataka, Rasona (garlic) is laxative.

DISCUSSION

Vibandha is not explained as a single disease in Ayurveda, but still described in association with many diseases. By the definition of constipation, with Rome II criteria & Bristol Stool Scale, one can correlate it with the vibandha which are given below. Mala kshaya may also be considered as a cause of constipation i.e., the infrequent passage of stool. The symptoms of mala kshaya are pain in cardiac region and sides and wind, with gargling sound, goes upward and moves around in the belly which is explained in Charaka Samhita. Thus, by suppression of defecation reflex, retention of feces occur which results in

constipation. If once there is formation of hard stool, incomplete evacuation of the bowel which results in straining during defecation leads to several complications like hemorrhoids, etc. so it can be said that vibandha is similar to constipation which can be managed by medications or just modification in dietary, lifestyle at the early stages.

CONCLUSION

After the overall description, lastly, it may be considered that vibandha (Constipation) is independently a disease and also a complication of some diseases. Its management should be according to the type of kosta (Alimentary canal). To conclude the treatment according to its cause along with plenty of fluid, physical exercise, many more form of laxatives like anulomana, bhedan etc which should be given according to the state of dosha and kosta.

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