
Clinical Evaluation of Madhvasava in Constipation (Vibandha)

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Abstract: Constipation is a common problem observed across the globe. Its vitiated condition is associated with number of diseases and numbers of physiological alterations or medicaments give rise to constipation. It affects the life-style. Many of medicines are prescribed by physicians for constipation which may work through smoothening effects of intestine or by increasing peristalsis movement or by irritation of intestine or by increasing the mass of bolus. Drugs with individual effects are present in Ayurveda, still a combined effect is matter of better relief.

Madhvasava, a formulation mentioned for diabetes in Charaka Chikitsasthana 6/41-44, is also indicated in constipation. It contains ingredients used for irritation of intestines, better muscular movement etc. Present clinical trial revealed the improved frequency of bowel movement, reduced abdominal pain with less time spent in efforts of evacuation.

Keywords: Constipation, Vibandha, Madhvasava, Bowel movement, Abdominal pain.....

Constipation is a common clinical symptom observed in gastrointestinal practices across the world since long past. *Ayurveda* indicates *Vibandha* (constipation) associated with many diseases. *American College of Gastroenterology* defines constipation as, 'unsatisfactory defecation with either infrequent stools or difficult stool passage or both'². *National Institute of Diabetes and Digestive and Kidney Diseases* of USA cites constipation as 'conditions viz., less than three bowel movement; hard, dry or lumpy stools; difficult or painful passage of stools and feeling that not all stool has passed'⁵. Other symptoms include abdominal discomfort, bloating and distention⁶. *World Gastroenterology Organization* refers constipation to straining, hard, pellet-like stools and inability to defecate¹. Prevalence of constipation is reported in 20% population with range of 2-27%³. Gautam (2016) evaluated the symptoms of constipation in 331 Indian patients and observed 35.4% patients with less than 3 motions per week⁴.

Causations of constipation are associated with life-style conditions, diet, medications, psychological factors, aging and medical conditions of people. These factors have greater impacts on neuromuscular system of colon. Based on causes, two types of constipations are suggested viz., primary and secondary. According to primary causes, three groups of primary constipation are suggested as normal transit constipation, slow transit constipation and anorectal dysfunction⁹. Secondary constipation is incorporated with endocrine and metabolic diseases, myopathic conditions, neurologic diseases, psychological conditions, structural abnormalities, irritable bowel syndrome and pregnancy⁹. *Charaka Samhita Siddhithana* 6/14 mentions the genesis of constipation due to administration of elimination therapy before the digestion of previous meal¹⁰. *Siddhithana* 7/55 further refers to constipation originated from the scraping effect of enema. In both cases, primary constipation is hinted¹¹. *Charaka Samhita Chikitsasthana* 14/179 indicates the secondary constipation¹². *Astanga Hridaya* points out the diarrhea and constipation due to *Prameha* (diabetes)¹³. In fact, diabetes-related gastroparesis affects the muscle of stomach or the nerve controlling the muscles. This results in constipation and diarrhea due to problems of defecation¹⁴.

Defecation is controlled by central nervous system and autonomous nervous system together. The extrinsic nerves (cortical and spinal) control the motor functions of colon while intrinsic nerves of colon, interstitial cells of Cajal and smooth muscle cells of colon respond to muscular movement of colon⁷. The extra-intestinal causes are linked with neuronal factors, hormonal impacts, neurochemical balances and metabolic balances while intestinal causes are connected to functioning of colon, anorectal and pelvic floor⁸.

Charaka Samhita Chikitsasthana 6/41-44 specifies *Madhvasava* in diabetes (Kaphaja and Pittaja) mainly, but it is also indicated in constipation. Asava itself is mentioned in *Ashtanga Hridaya* Sutrasthana 5/62-64 as laxative¹⁷ while depending upon ingredients included in preparation of Asava, other uses are observed. Therefore, clinical evaluation of *Madhvasava* was done in patients with constipation.

Materials and Methods: Preparation of Medicine¹⁶: Coarse powder of 12 gm each of lodhra, shati, pushkarmoola, ela, murva, vidanga, triphala, yavani, chavya, priyangu, kramuka, vishala, kiratikta, katuki, bharangi, pippalimoola, kustha, ativisha, patha, indrayava, nagakesar, patra, maricha and musta were taken after passing through sieve number 44. They were taken in 12.28 liters of water and heat was applied to make decoction. It was boiled till the quantity of water was reduced to one fourth. It was filtered and cooled to 42°C. Now, 1.536 gm of honey was added to this and they were mixed thoroughly. Now, this mixture was brought to sealed porcelain vessel and was kept for 15 days in dark and warm place. After sandhana siddhi lakshana only, it was used for internal purpose.

Clinical evaluation: Rome diagnostic III criteria was opted for evaluation¹⁸.

Study Design: Pre and Post Treatment Interventional

Dose: 30 ml thrice a day one hour before meal with equal quantity of water

Actual enrollment for treatment: 30

Outcome measures: Frequency of bowel movement, difficulty in painful evacuation, feeling of incomplete evacuation, abdominal pain, minutes in lavatory per attempt, type of assistance, unsuccessful attempt for evacuation per 24 hours.

Inclusion criteria:

- i. Patients feeling strained during defecation for at least 25% of bowel movements.
- ii. Patients having lumpy or hard stools in at least 25% of defecations.
- iii. Patients having sensation of incomplete evacuation for at least 25% of defecations.
- iv. Patients having sensation of anorectal obstruction/blockage for at least 25% of defecations.
- v. Patients involving manual maneuvers to facilitate at least 25% of defecations.
- vi. Patients having fewer than 3 defecations per week.
- vii. Patients with rare presence of loose stools without using laxatives.
- viii. Patients of both sexes in age group of 40-60 years.

Exclusion criteria:

- i. Patients suffering from irritable bowel syndrome.
- ii. Patients having diseases of endocrine and metabolic problems.
- iii. Patients having Hypercalcemia, hyperthyroidism, hypothyroidism, uremia.
- iv. Patients having myopathic condition like amyloidosis, myotonic dystrophy and scleroderma.
- v. Patients of neuropathic diseases, cerebrovascular diseases, multiple sclerosis, Parkinson's disease and spinal cord injury.
- vi. Patients having psychological problems like anxiety, depression etc.
- vii. Patients with structural abnormalities like anal fissures, hemorrhoids, colonic strictures, inflammatory bowel diseases, rectal prolapse, rectocele and obstructive mass lesions.
- viii. Pregnant ladies.
- ix. Patients taking medications like aluminum containing antacids, anticholinergics, antidepressants, antihistamines,

calcium channel blockers, clonidine, iron supplements, levodopa, narcotics, nonsteroidal anti-inflammatory drugs, opioids and sympathomimetic drugs.

Scoring Pattern

Frequency of Bowel Movements

1-2 times per 1-2 days	0
2 times per week	1
Once per week	2
Less than once per week	3
Less than once per month	4

Feeling of Incomplete Evacuation

Never	0
Rarely	1
Sometimes	2
Usually	3
Always	4

Minutes in Lavatory Per Attempt

Less than 5	0
5-10	1
10-20	2
20 -30	3
More than 30	4

Unsuccessful Attempts for Evacuation Per 24 Hours

Never	0
1-3	1
3-6	2
6-9	3
More than 9	4

Difficulty: Painful Evacuation Effort

Never	0
Rarely	1
Sometimes	2
Usually	3
Always	4

Pain: Abdominal Pain

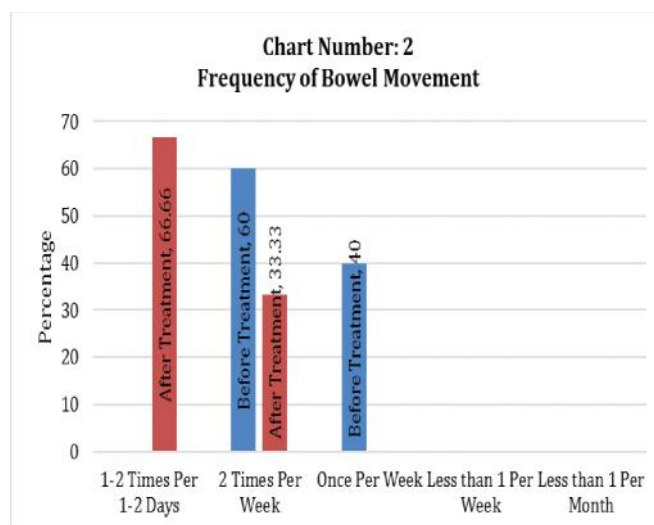
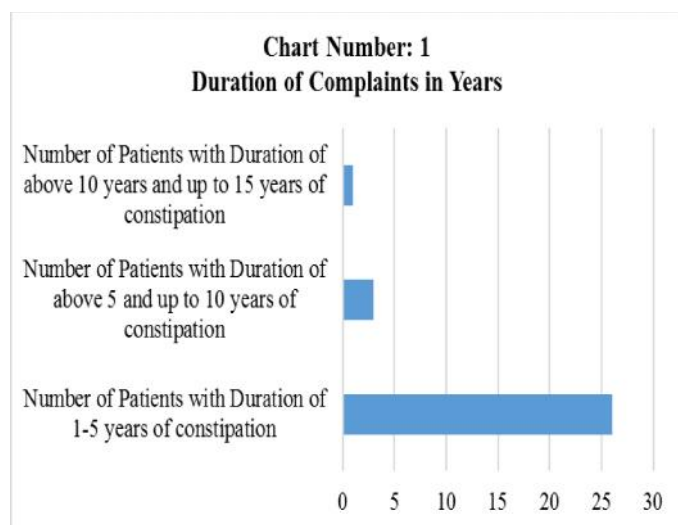
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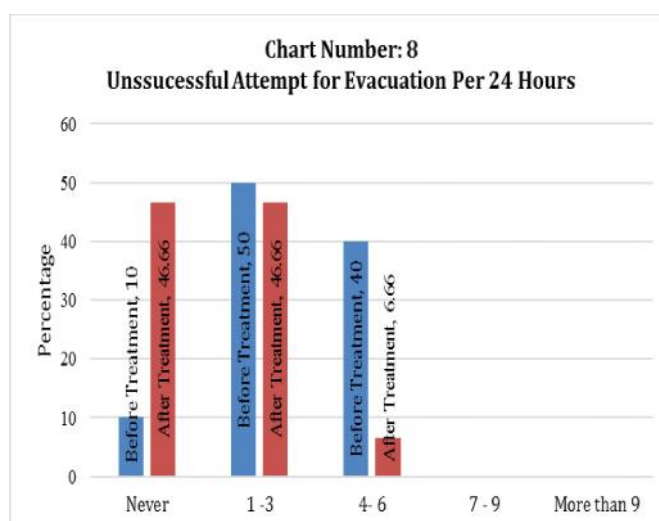
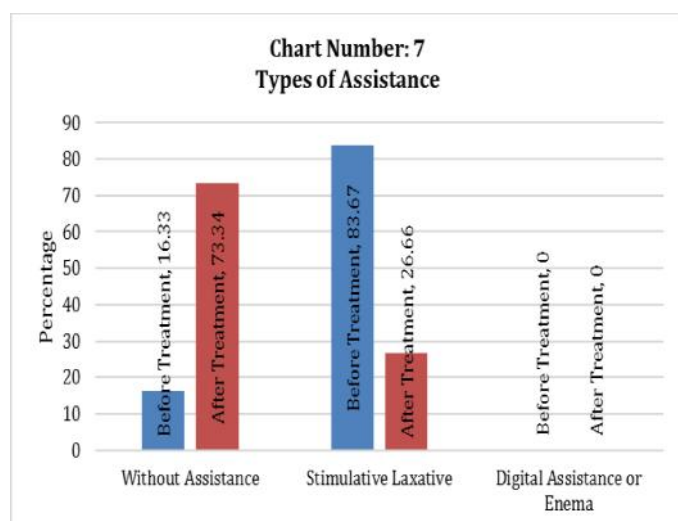
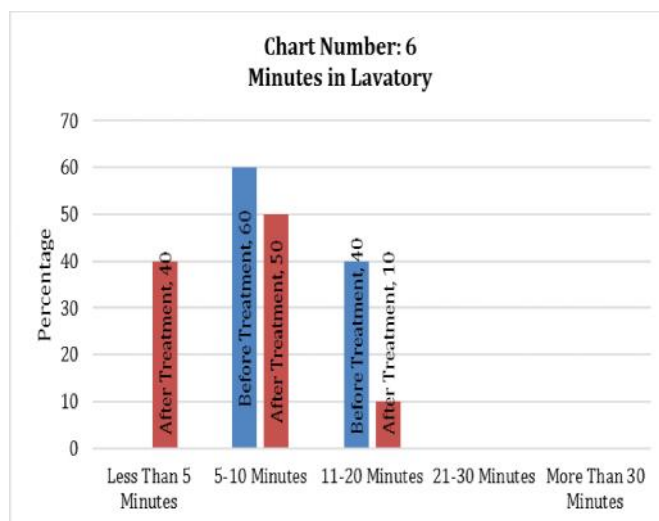
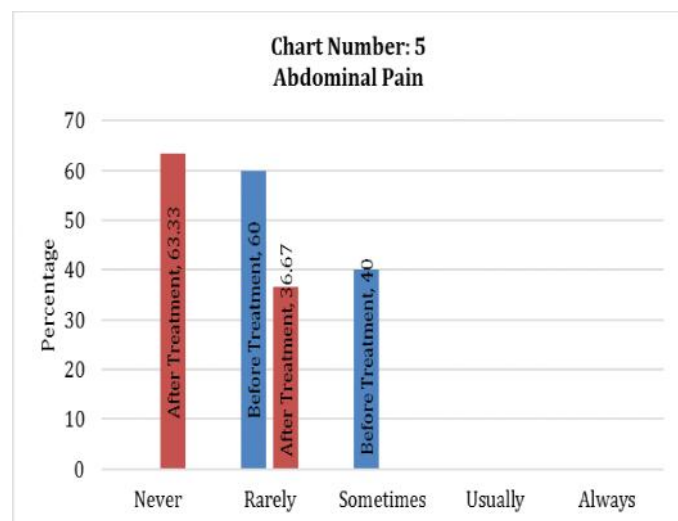
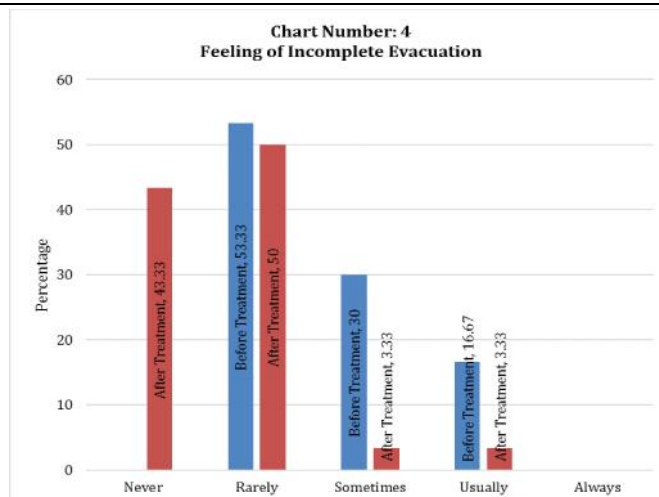
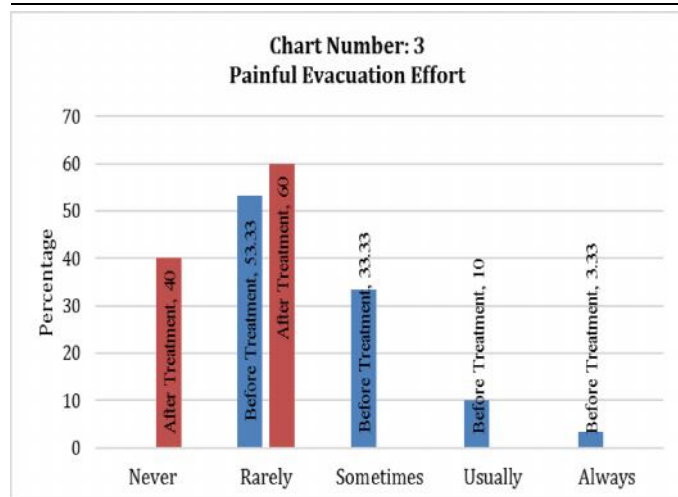
Type of Assistance

Without assistance	0
Stimulative laxatives	1
Digital assistance or enema	2

Statistical Analysis: Wilcoxon Signed Rank Test

Result





Wilcoxon Signed Rank Test

	Mean Rank	Sum of Ranks	Significance (95% confidence interval)
Frequency of Bowel Movement	14	378	< 0.05
Painful Evacuation Effort	14.50	406	< 0.05
Feeling of Incomplete Evacuation	13	325	< 0.05
Pain: Abdominal Pain	13	325	< 0.05
Minutes in Lavatory Per Effort	11.50	253	< 0.05

Types of Assistance	9	153	< 0.05
Unsuccessful Attempts for			
Evacuation Per 24 Hours	10.85	184.50	< 0.05

Discussion and Conclusion: Out of 30 patients taken for study, 26 patients were having complaints since last 1-5 years while 3 were having complaints since last 5-10 years and 1 was complaining with more than 10 years. All patients were having frequency of bowel movement in a week. 60% were having 2 times a week while 40% were having once a week. The condition improved to 1-2 times in 1-2 days in 66.66% while twice a week in 33.33% patients. Reduction in painful evacuation is noted as 40% patients were expressed no pain while 60% hinted rare pain. None of them had reported never pain before treatment. Feeling of incomplete evacuation was observed absent in 43.33% patients while 50% hinted for rare feeling after treatment. Before treatment, all of them were having problem of feeling of incomplete evacuation of various intensities. Pain was reduced in 63.33% patients, while 40% patients disclosed time in lavatory reducing to within 5 minutes. 73.34% patients revealed the defecation without any assistance while it was 16.33% before treatment. The reduction in unsuccessful attempts was also noted as it was marked as never in 46.66% patients after treatment which was only 10% before treatment.

The formulation, mentioned in treatment of diabetes, is observed working on various aspects of constipation with effects at differentiated degrees. A detailed mechanism of study is required to for further study.

Conflict of Interest: No Conflict of Interest

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