

# Ayurvedic management of achalasia

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## ABSTRACT

Achalasia is an esophageal motor disorder characterized by sustained lower esophageal sphincter contraction and reduced esophageal peristalsis. This pathology eventually results in symptoms like dysphagia, regurgitation and occasional chest pain related to food intake. This is an uncommon disorder of unexplained etiology; however viral, autoimmune and neurodegenerative causes are often afflicted to its manifestation. As per the current state of knowledge, achalasia is considered to be a chronic incurable condition. The treatment options offered here primarily aim at reducing the tone of lower esophageal sphincter by pharmacologic, endoscopic or surgical means. We are presenting here a case of achalasia with two years of symptomatic history of food regurgitation, dysphagia and heart burn without any noticeable response from allopathic medicines. The patient was subsequently kept under ayurvedic therapy considering the symptoms caused by *vata* impairment and hence requiring *vatanulomana* and reduction in esophageal muscle tone as the primary management. The patient was kept under suggested Ayurvedic therapy and followed-up for 3 months. A symptom-free follow-up in this case was noticed after completion of 1 month of Ayurvedic therapy.

**Key words:** Achalasia, amlapitta, ayurveda, gastroesophageal reflux disease, *Vatanulomana*

## INTRODUCTION

Achalasia is a primary esophageal motor disorder causing insufficient lower esophageal sphincter (LES) relaxation and reduced esophageal peristalsis. The symptoms produced thereby are dysphagia, both with solids and liquids, occasional chest pain related with food intake and regurgitation. Achalasia is an uncommon condition of unknown etiology where the pathology is proposed to be of a viral, autoimmune or neurodegenerative nature.

Achalasia is commonly misdiagnosed as gastroesophageal reflux disease (GERD) owing to symptoms like dysphagia,

chest pain, weight loss and heart burn. The distinctive features of achalasia are regurgitation of bland undigested food or saliva, substernal chest pain and dysphagia, both with solid and liquid, in the absence of any stricture or tumor.<sup>[1]</sup>

The American College of Gastroenterology (ACG) recommends that achalasia must be suspected in those with dysphagia to solids and liquids and in those with regurgitation unresponsive to an adequate trial of proton pump inhibitor (PPI) therapy.<sup>[2]</sup>

Achalasia can be diagnosed manometrically by identifying insufficient relaxation at LES, radiographically by observing loss of peristalsis, esophageal dilation and minimal LES opening causing bird's beak appearance and also by seeing poor emptying of barium in a barium swallow study.<sup>[3]</sup> It can also be diagnosed endoscopically by seeing the dilated esophagus, with retained saliva, liquid and undigested food particle in the absence of any stricture or tumor.

Achalasia occurs equally in men and women, with an incidence of 1 in 100,000 and a prevalence of 10 in 100,000 annually.<sup>[4]</sup> The peak incidence occurs between 30 and 60 years. The pathological consequence of the disease is the degeneration of ganglionic cells in the myentric plexus of the esophageal body and LES. Although the cause of the degenerative process is unclear, the end result of the inflammatory process is loss of inhibitory

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neurotransmitters, nitrous oxides and vasoactive intestinal peptides and, consequently, the imbalance between the excitatory and inhibitory neurons. The result is unopposed cholinergic activity that leads to incomplete relaxation of LES and reduced peristalsis due to loss of gradient along the esophageal body.

Therapeutic recommendations for achalasia are largely surgical and include either graded pneumatic dilation (PD) or laparoscopic surgical myotomy with a partial fundoplication as initial therapy in those who are fit and willing to undergo surgery.<sup>[5]</sup> However, PD and surgical myotomy are recommended to be performed at high-volume centers of excellence only. The choice of initial therapy is to be guided by patient's age, gender, preference and local institutional expertise.

Botulinum toxin therapy is also recommended in patients who are not good candidates for more definitive therapy with PD or surgical myotomy. Pharmacologic therapy for achalasia is recommended for patients who are unwilling or cannot undergo definitive treatment with either PD or surgical myotomy and have failed botulinum toxin therapy. These therapeutic options available for achalasia are neither available nor affordable to the majority of people in India. In such a nebulous condition, looking for a feasible yet effective Ayurvedic intervention for achalasia could be a fruitful exercise.

A delayed peristalsis resulting in delayed emptying of the esophagus is understood as a *vata* abnormality in Ayurveda. Deglutition, movement of the food in the intestine and defecation are considered to be a function of *vata*. Any abnormality in these functions therefore is supposed to be originating because of a derangement in *vata*. A spasm and subsequently derived pain is also considered an outcome of *vata* derangement in Ayurveda. Ayurveda does not describe any specific disease entity resembling that of achalasia, but essentially the symptom complex is that it can easily be inferred in terms of Ayurveda.

## CASE REPORT

An otherwise healthy female of about 52 years developed, gradually, a regurgitation of food after meal in the beginning of the year 2012. This was subsequently associated with dysphagia and occasional heart burn. She was treated by a family physician initially with the help of H2-blockers and Imidazole drugs (23-April-2012). A transient relief occurred with subsequent relapse of the symptoms. Gradually, the patient developed the features of dysphagia with solid as well as with liquid foods. She was subsequently treated with antacids, antiemetic and neurotropic vitamins (21-September-2012). Following no relief with the

given treatment, she visited an ENT specialist. This time, she was diagnosed as having reflux esophagitis and was given prokinetics, antiemetics, multivitamins and a tranquilizer in addition to the H2-blockers (12-October-2012). During the course of this illness, the patient was variously investigated to rule out certain conditions in a bid to diagnose her case. These investigations included chest radiograph and various hematological investigations, including complete blood counts and liver function test, which were all normal eventually. She was found to be non-diabetic and non-hypertensive. An ultrasonography of the abdomen was also of no specific finding. Her thyroid functions were also found to be within the normal range.

With progressive complaints of vomiting following the intake of food, retrosternal burning and dysphagia, she further consulted at a secondary care hospital in Lucknow (21-May-2013). This time, the patient had gone for upper gastrointestinal endoscopy, which revealed a mild antral gastritis without any other significant finding (3-March-2013). She was then recommended for PPIs, prokinetics and antiemetic along with a hepatic stimulant. There was symptomatic relief, but the symptoms recurred after a few days.

Perplexed with the sustained symptoms, recurring repeatedly and with a confusion about the possible cause of the disease, this time the patient consulted an ayurvedic teaching hospital in Lucknow (SR, PC) for an Ayurvedic opinion in her case (05-April-2014).

Upon interrogation in the Ayurvedic clinic, the patient reported to have recurrent vomiting every afternoon 2–3 h after food intake, retrosternal burning, food-related dysphagia and an apprehension with food intake because of fear of vomiting and pain. Upon pulse examination, the patient was found to have an excess of *pitta*. (This method of pulse examination was empirically developed by the authors for a rapid clinical diagnosis of dominant *dosha* at the time of clinical examination. It was hypothesized that the clinical features at a given time should correspond to the *dosha* prevalence and hence it can help making the management plans. A validation study of pulse examination techniques is under progress.) Her *prakriti* was suggestive of *vata* dominance (this *prakriti* examination was performed by the authors on the basis of their clinical experience and scientific studies performed to standardize the methods of *prakriti* examination in the clinic).<sup>[6]</sup> Upon Ayurvedic analysis, her symptoms were proposed to be attributed to *vata* and *pitta* derangement, causing poor esophageal motility and LES spasm, leading to the retention of food in the esophagus terminating into dysphagia finally (spasm and obstruction are considered to be the symptoms caused by *vata*). A retrosternal burning could

have been attributed to excess of *dushta pitta* (*urdhvagaamla pitta* symptoms are akin to that of retrosternal burning). A manometry would have been the ideal method to diagnose this case for its possibility of having achalasia, but this was not done because of its unavailability. With a hypothesized Ayurvedic pathology in this case, the patient was advised for barium swallow examination, which has shown a moderate dilation of esophagus and partial narrowing of the lower esophageal sphincter (9-April-2014) (image not available). Taking cues from the barium swallow, which has empirically supported the Ayurvedic pathological hypothesis in the case (LES narrowing is proposed to be caused by excess *vata*), the treatment plan was made aiming at removing the esophageal impediment by *vata* regulation by Ayurvedic drugs and internal *snehana* aiming at improved esophageal motility-reduced LES spasm. The excess of *pitta* causing retrosternal burning was taken care of with the help of a few *pitta*-reducing drugs. The following Ayurvedic treatment was recommended to the patient [Table 1].

The Ayurvedic treatment was continued for about 3 months. A significant symptomatic improvement was observed in the patient after 1 month of the initial Ayurvedic therapy. There had not been any regurgitation of food and there was minimal dysphagia associated with either kind of food intake. There had remained an occasional retrosternal burning, but to a minimal extent compared with its earlier intensity. She gained 2 kg since she came under Ayurvedic therapy (50 kg before treatment and 52 kg after 3 months of treatment). The patient was called for follow-up every month with a continuation of Ayurvedic treatment. No specific complaints were reported in the last 2 months of follow-up.

## DISCUSSION

Achalasia is an uncommon disorder of the esophagus that results in symptoms like regurgitation of food, dysphagia and retrosternal burning. The treatment options in this condition are not very clear and often require a combination of invasive surgical procedures requiring a center of excellence to perform. This condition also

poses a diagnostic dilemma, causing a misdiagnosis of GERD in many cases.<sup>[11]</sup> In the absence of defined and easily executable therapy, the patients often live a miserable life where their food-related activities are thoroughly compromised. Because of the apprehension of regurgitation, dysphagia and chest pain related with food intake, the patients often limit their food intake to a minimum just to minimize the chances of recurrence of food-related symptoms. The present case gives us an opportunity to look into the pragmatic ease and effectiveness of Ayurvedic therapeutics in an entirely new dimension. This is an example of how the missed diagnosis can change the course of the management only to delay the responses (an early diagnosis and subsequent treatment might have changed the course of the disease in this case). It also explores that, sometimes, the evidence-based recommendations in allopathic medicine are not possible to be executed in India either because of the lack of expertise they require or the cost involved therein. This also explains how the modern investigations can not only be inferred well in terms of Ayurveda, but can also be qualitatively utilized to improve the Ayurvedic clinical practice. This case also presents us an example as to how a simple Ayurvedic approach of diagnosis and management can save time and resources by offering relief in a given clinical condition compared with the cumbersome and cost-intensive interventions proposed by allopathic medicine.

Achalasia is an uncommon clinical condition that is commonly misdiagnosed as GERD in the family practice.<sup>[7]</sup> A non-responding patient on conventional therapy with a suspected diagnosis of GERD often puts the treating physician into a flux, and it often results in the addition of anxiolytics and tranquilizers in the treatment prescriptions (as it happened in the present case).

A recurrent regurgitation of food after 2–3 h of a meal is a clear indicator of reduced esophageal peristalsis and increased tone of the lower esophageal sphincter.<sup>[8,9]</sup> A dysphagia associated with solid and liquid food in the absence of any endoscopic finding is suggestive of a pathology that is more functional rather than being organic

**Table 1: Ayurvedic management of achalasia patient**

Date of initiation	Disease condition	Drug name	Dose	Response
5-Apr-14	Retrostrenal burning, regurgitation of food, dysphagia	Avipattikarachurna Shankhabati Pravalbhasma Arogyavardhini	3 g twice a day 1 tablet twice a day 250 mg twice a day 1 tablet twice a day	Partial improvement in symptoms Regurgitation persisted
28-Apr-14	Food regurgitation, retrosternal burning	Hingvadibati along with 5 mL errand oil	1 tablet thrice a day dipped in castor oil	Improved substantially. No regurgitation. Occasional retrosternal burning
12-May-14	Occasional retrosternal burning	Pravalbhasma Hingvadibati along with errand oil	250 mg twice a day 1 tablet twice a day dipped in 5 mL of castor oil	Improved substantially. No regurgitation. No retrosternal burning. Weight gain of 2 kg

in nature. This case was treated through Ayurveda in a novel way. The novelty of this approach was to consider the basic doshas responsible for the symptom, their confirmation with the help of modern diagnostic tools and planning a treatment aiming at specific *dosha* causing the symptoms. This method of treating a disease is called as *dosha pratyaneekchikitsa* in Ayurveda. The primary treatment offered to the patient was *Hingvadibati* composed of asafetida root resin extract, which is an Ayurvedic prokinetic (*vatanulomak*), thereby increasing the esophageal peristalsis.<sup>[10]</sup> *Erandataila* (castor oil) was selected as a special *anupana* (vehicle) with this drug to enhance the *vatanulomana* property of the drug and at the same lubricating the LES to release its spasm. *Avipattikarachurna*, another preparation used in the treatment, was mainly composed of *nishoth* (operculinaturpethum), which is a known purgative. This preparation was supposed to increase the peristalsis again along with a care for increased *pitta* causing a retrosternal burning. The other preparations like *shankhabati* and *pravalbhasma* were mainly intended to reduce the *pitta* to counter the retrosternal burning. It was the combined effect of all these preparations that has resulted in a clear and stable clinical improvement in the patient. A gain in weight within this period of Ayurvedic treatment was a clear testimonial of the patient's better tolerance with food and reduced intensity of the symptoms.

## CONCLUSION

For majority of achalasia cases in India belonging to common rural and suburban settings, the kind of recommendations made by the ACG are neither affordable nor executable. Ayurveda proposes to offer a dependable remedy in such cases where the clinical symptoms are suggestive of achalasia and where the conventional allopathic therapy is not offering any sustainable benefit.

Taking these leads further, this can also offer a dependable cure for such cases if more intensive clinical trials can be performed with similar cases to further prove its efficacy.

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