

ACHALASIA CARDIA WITH SIGMOID ESOPHAGUS AND ESOPHAGEAL CANDIDIASIS MANAGED BY PERORAL ENDOSCOPIC MYOTOMY (POEM): A CASE REPORT

Amritha Krishna¹| Nanthana Chandrabose²| Drishya L^{3*}| Shaiju S Dharan⁴|

1. 6th Year Pharm D student, Ezhuthachan college of Pharmaceutical Sciences, Marayamuttom, TVM, Kerala

2. 5th Year Pharm D student, Ezhuthachan college of Pharmaceutical Sciences, Marayamuttom, TVM, Kerala

3. Assistant Professor, Ezhuthachan college of Pharmaceutical Sciences, Marayamuttom, TVM, Kerala

4. HOD, Principal Department of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Sciences, Marayamuttom, TVM, Kerala

Abstract

Achalasia cardia is an uncommon esophageal motility disorder characterized by impaired relaxation of the lower esophageal sphincter and loss of normal esophageal peristalsis. Delayed diagnosis may lead to progressive esophageal dilatation and sigmoid deformity, significantly affecting swallowing and quality of life. We report the case of a 60-year-old female who presented with progressive dysphagia, recurrent vomiting, regurgitation of food, and severe heartburn of two months duration. Upper gastrointestinal endoscopy revealed a dilated sigmoid esophagus with food stasis, esophageal candidiasis, and a tight gastroesophageal junction. Barium swallow demonstrated marked dilatation of the lower two-thirds of the esophagus with smooth tapering at the gastroesophageal junction, producing the characteristic bird-beak appearance. Based on clinical, endoscopic, and radiological findings, a diagnosis of achalasia cardia with sigmoid esophagus was established. The patient underwent Peroral Endoscopic Myotomy (POEM), following which significant symptomatic improvement was observed. This case highlights the importance of early diagnosis and demonstrates the effectiveness of POEM in the management of advanced achalasia cardia.

Keywords: Achalasia cardia, Sigmoid esophagus, Dysphagia, POEM, Bird-beak sign, Esophageal candidiasis.

Introduction

Achalasia cardia is a rare primary esophageal motility disorder resulting from degeneration of inhibitory neurons within the myenteric plexus. This neuronal loss impairs relaxation of the lower esophageal sphincter (LES) and disrupts coordinated esophageal peristalsis, ultimately leading to functional obstruction of the esophagus. Patients commonly present with progressive dysphagia, regurgitation of undigested food, chest discomfort, heartburn, and weight loss.

The diagnosis of achalasia relies on a combination of clinical findings and investigations such as upper gastrointestinal endoscopy, barium swallow study, and esophageal manometry. Long-standing disease may result in marked esophageal dilatation and tortuosity, producing a sigmoid-shaped esophagus. Such advanced cases are often associated with significant morbidity and require definitive intervention.

Peroral Endoscopic Myotomy (POEM) has emerged as a minimally invasive and highly effective therapeutic option for achalasia. We present a case of achalasia cardia with sigmoid esophagus and associated esophageal candidiasis that was successfully managed with POEM.

Case Presentation

A 60-year-old female presented to the Gastroenterology Department with complaints of progressive difficulty in swallowing, recurrent episodes of vomiting, regurgitation of undigested food, and severe heartburn for approximately two months. The symptoms gradually worsened over time and significantly affected her oral intake. There was no documented history of diabetes mellitus, hypertension, chronic respiratory illness, malignancy, or previous gastrointestinal surgery.

On admission, the patient was conscious, oriented, and hemodynamically stable. General examination revealed a moderately built female with no pallor, icterus, clubbing, cyanosis, pedal edema, or generalized lymphadenopathy.

Vital signs were within normal limits, with a pulse rate of 77 beats per minute, blood pressure of 120/80 mmHg, respiratory rate of 18 breaths per minute, and oxygen saturation of 100% on room air. Systemic examination of the respiratory, cardiovascular, abdominal, and neurological systems was unremarkable.

Investigations

Upper Gastrointestinal Endoscopy

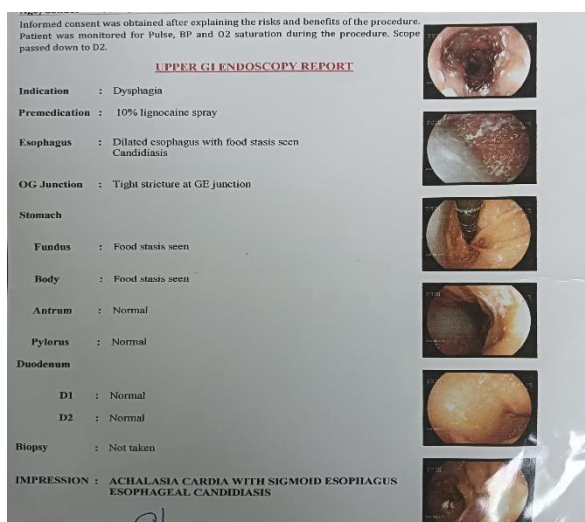
Upper gastrointestinal endoscopy performed revealed a markedly dilated esophagus with retained food particles and evidence of food stasis. White mucosal plaques suggestive of esophageal candidiasis were observed. A tight narrowing was noted at the gastroesophageal junction. Examination of the stomach showed retained food material within the fundus and body, while the antrum, pylorus, and duodenum appeared normal.

The endoscopic impression was Achalasia Cardia with Sigmoid Esophagus and Esophageal Candidiasis.

Barium Swallow Study

A barium swallow examination performed demonstrated marked dilatation of the lower two-thirds of the esophagus with smooth tapering at the gastroesophageal junction. This produced the classical bird-beak appearance, a hallmark radiological feature of achalasia. No filling defects, outpouchings, or contrast extravasation were identified.

These findings strongly supported the diagnosis of achalasia cardia.



Diagnosis

Based on the patient's clinical presentation, endoscopic findings, and radiological evaluation, a diagnosis of Achalasia Cardia with Sigmoid Esophagus and Associated Esophageal Candidiasis was established.

Management

Considering the advanced nature of the disease and the presence of sigmoid esophagus, the patient was planned for definitive endoscopic treatment with Peroral Endoscopic Myotomy (POEM).

POEM is an advanced minimally invasive endoscopic procedure designed to relieve functional obstruction at the lower esophageal sphincter. The procedure directly addresses the underlying pathophysiology of achalasia by dividing the dysfunctional muscle fibers responsible for impaired esophageal emptying.

After adequate preparation, a submucosal injection was administered to elevate the esophageal mucosa and create a safe working space. A small mucosal incision was then made, allowing access to the submucosal

layer. Through this entry point, a submucosal tunnel was carefully created and extended across the gastroesophageal junction.

Following successful tunneling, selective myotomy of the circular muscle fibers of the lower esophagus and lower esophageal sphincter was performed. This step reduced sphincter pressure and relieved the functional obstruction responsible for the patient's symptoms. Gentamycin solution was flushed into the tunnel, and the mucosal entry site was subsequently closed using hemoclips.

The procedure was completed successfully without any immediate complications.

Outcome and Follow-Up

The patient tolerated the procedure well and remained clinically stable throughout the postoperative period. Gradual improvement in swallowing was observed, with a reduction in regurgitation and vomiting episodes. Oral intake improved, and no procedure-related complications were documented during hospitalization.

The patient was discharged in stable condition with advice for regular gastroenterology follow-up and monitoring for symptom recurrence or gastroesophageal reflux.

Discussion

Achalasia cardia is a chronic neurodegenerative disorder characterized by impaired lower esophageal sphincter relaxation and loss of esophageal peristalsis. Although uncommon, it remains an important cause of progressive dysphagia. Delayed diagnosis often results in advanced disease with marked esophageal dilatation and structural deformities such as sigmoid esophagus.

The present patient exhibited several classical manifestations of achalasia, including progressive dysphagia, regurgitation of undigested food, vomiting, and heartburn. The diagnosis was supported by characteristic endoscopic findings and the classical bird-beak appearance observed on barium swallow examination.

Food stasis resulting from prolonged esophageal obstruction can create a favorable environment for fungal colonization and infection. The presence of esophageal candidiasis in this case was most likely secondary to chronic retention of food and secretions within the dilated esophagus.

Peroral Endoscopic Myotomy (POEM) has revolutionized the management of achalasia cardia over the past decade. First introduced by Inoue and colleagues, POEM combines the principles of natural orifice transluminal endoscopic surgery with surgical myotomy. Unlike conventional laparoscopic Heller's myotomy, POEM is performed entirely through the endoscope without external incisions, resulting in reduced postoperative discomfort and faster recovery.

The procedure involves creation of a submucosal tunnel followed by division of the dysfunctional circular muscle fibers of the lower esophageal sphincter. By directly addressing the underlying pathophysiology of achalasia, POEM restores esophageal emptying and provides significant symptomatic relief. Clinical studies have reported success rates exceeding 90%, even among patients with advanced disease and sigmoid esophagus.

In the present case, POEM was selected because of the patient's advanced achalasia and marked esophageal dilatation. The favorable postoperative outcome and improvement in swallowing function further support the role of POEM as an effective and safe therapeutic option for complex cases of achalasia cardia.

Conclusion

Achalasia cardia should be considered in patients presenting with progressive dysphagia, recurrent regurgitation, and vomiting. Early diagnosis through endoscopic and radiological evaluation is essential to prevent disease progression and associated complications. The development of sigmoid esophagus represents advanced disease requiring definitive intervention. POEM offers a minimally invasive and highly effective treatment approach, providing substantial symptomatic relief and improved quality of life. This case emphasizes the importance of timely diagnosis and highlights the successful use of POEM in managing advanced achalasia cardia with sigmoid esophagus.

Patient Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying clinical information.

Conflict of Interest

The authors declare that there are no conflicts of interest.

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