



ESOPHAGEAL INTRAMURAL PSEUDODIVERTICULOSIS AND GASTROESOPHAGEAL REFLUX DISEASE PRESENTING WITH VOMITING: A CASE REPORT

Aliakbar Hajaghamohammadi, Bahareh Keshavarzi, Ali Zargar*

Velayat Clinical Research Development Unit, Velayat hospital, Qazvin University of medical sciences, Qazvin, Iran.

***Corresponding author:** Dr. Ali Zargar, Velayat Clinical Research Development Unit, Velayat Hospital, 22 Bahman Blvd, Qazvin, Iran.

E mail: alizargar78@yahoo.com, P.O.BOX: 34719-76161,

Tel: +982833760620 (669),

Fax: +982833790611.

ABSTRACT:

We report a case of vomiting due to Gastroesophageal Reflux Disease (GERD) in a very elderly patient with coincidental Esophageal intramural pseudodiverticulosis (EIP). He had esophageal ulcer most probably due to GERD and an asymptomatic stricture probably caused by GERD and unlikely to be due to EIP, as esophagogastroduodenoscopy (EGD) showed EIP at the inlet of an eccentric stricture and ulceration at the lower one third of esophagus with normal gastroduodenoscopy. Patient was discharged with improved general condition with treatment of GERD, supporting the fact that not only the presentation of GERD in very elderly is unusual but also its coincidence with EIP presenting with vomiting without being caused by its asymptotic stricture is reportable as was in our case.

Keywords: Esophageal intramural pseudodiverticulosis, Gastroesophageal Reflux Disease, Vomiting.

INTRODUCTION

Esophageal intramural pseudodiverticulosis (EIP) has been reported since 1960 and about 220 cases are reported up to 2000.¹ It is defined as small saccular evagination of the esophageal wall. Diagnosis is strictly a histological diagnosis but esophagogastroduodenoscopy (EGD) and barium esophagogram have a characteristic diagnostic appearance.² Its commonest symptom is dysphagia seen in more than 80% of patients other symptoms may be chest tightness and odynophagia but may also be asymptomatic and found incidentally by endoscopy.³ In this report we present a very elderly patient with dyspepsia, recurrent vomiting and weight loss for 2 months diagnosed as Esophageal Intramural Pseudodiverticulosis (EIP) and most probably Gastroesophageal Reflux Disease (GERD) by EGD. His symptoms improved with treatment of GERD.

The aim of this report is supporting the fact that not only the presentation of GERD in very elderly is unusual but also its coincidence is reportable as was in our case.

CASE REPORT

A 88- year - old male presented with dyspepsia, recurrent vomiting and 5kg of weight loss in two months with symptoms of GERD for a long time and no other underlying disease.

On habit history he was an ex-smoker of 50 pack/year and quit for 10 years with no history of ethanol consumption. He had blood pressure of 120/70 mmHg, pulse rate of 80/min, respiratory rate of 16/min and oral temperature of 37°C. The main abnormal laboratory findings were as followings:

Hgb = 8.2g/dL (14-17), Fe = 23µg/mL (40-120), Ferritin = 23µg/mL (30-400), BUN = 28 mg/dL (8.4-25.7) and creatinine = 1.7 mg/dL (0.7-1.4)

One unit of packed RBC was transfused which raised the hemoglobin to ten, BUN fell from 28 to 23 and creatinine fell to 1.4 subsequently with appropriate treatment. Other investigations for weight loss and vomiting were normal.

EGD showed three orifices of about 2-4 mm in diameter in the esophageal wall, compatible with EIP, at the inlet of an eccentric stricture and ulceration from 28 to 33 cm from gums' margin allowing the passage of scope easily onwards. E.G junction was at 35cm (Figure 1) and gastroduodenoscopy was normal.

Regarding the patient's symptoms and result of EGD he was admitted with the diagnosis of EIP & esophageal stricture with esophageal ulcer and the appropriate treatment was started. Biopsies showed ulcerative esophagitis most probably due to reflux esophagitis.

Chest Computed Tomography (CT) (Figure2) was also performed to further support and rule out differential diagnosis.

Because of iron deficiency anemia pancolonoscopy revealed no abnormality. Treatment of GERD improved his symptoms and therefore he was discharged with cap-omeprazole of 20mg bid plus ferrous sulfate tablet of 300 mg tid.

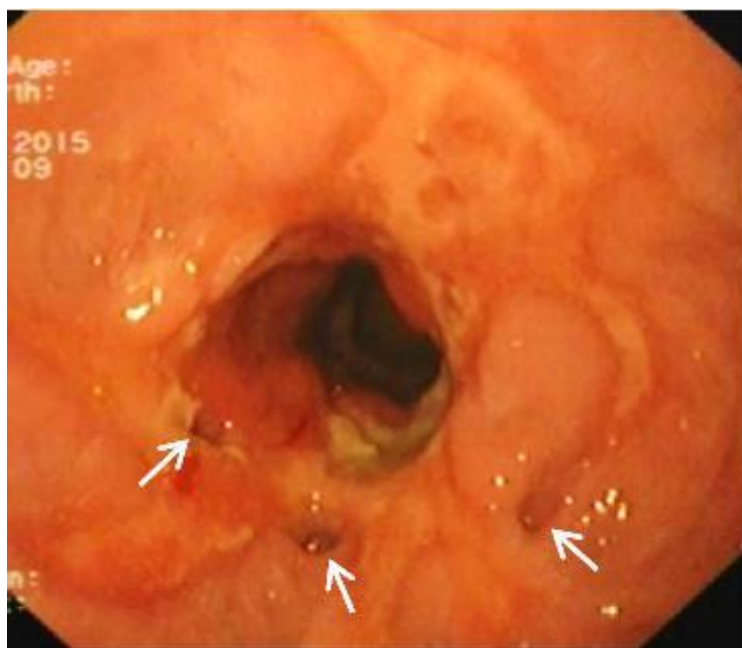


Fig1. Esophageal intramural pseudodiverticulosis shown as three orifices with ulceration and stricture of the lower one third.

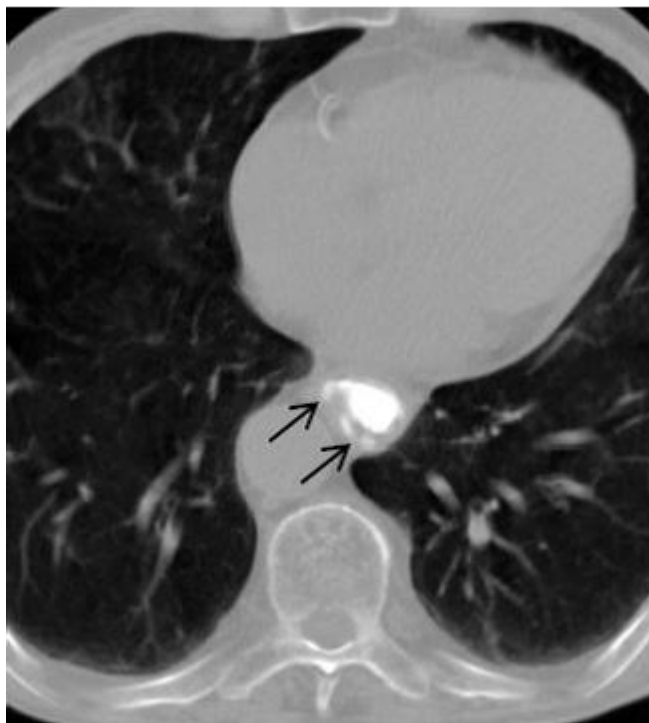


Figure2. Multi slice-spiral CT scan, of thorax with contrast shows;

Wall thickening and stenosis in the distal part of esophagus with some intramural flasked shaped out pouching, indicative of esophageal pseudodiverticulosis, with 1.8-2.4mm width and 2-3mm length.

DISCUSSION

Based on the study by Alberto, vomiting is one of the atypical symptom in the very elderly patient suffering from GERD reported to be seen in 30.3% of patients while weight loss and anorexia, are also reported in 15.4 % and 9.7% respectively in them.⁴ Another atypical symptom is anemia reported in 21.1 % of such patients.^{4, 5} Our patient had all first four of the above atypical symptoms and although he had stricture but had no dysphagia. Vomiting in our case was due to esophagitis as other causes were ruled out and it disappeared with its treatment and was unrelated to EIP, although in a case report by Liu ¹ vomiting was due to severe dysphagia of EIP but the stricture in our patient did not cause dysphagia.

EIP is measured about 1-4 mm in length and 1-2 mm in width and its number may vary from 5 to 20.³ It affects males 50% more than females with the mean age of 53.5 years (0.75 to 86 years). ⁶

Its etiology is unknown but is associated with diabetes mellitus, chronic alcoholism and reflux esophagitis.² The other associated esophageal conditions may be candidiasis, herpes, varices, cancer, AIDS, crohn's disease and tuberculosis^{6,7}. Mallory-Weiss syndrome, esophageal web and multiple cutaneous sebaceous cysts are also mentioned as possible associated conditions.¹

Although its diagnosis is strictly a histological diagnosis mostly made on surgical specimen⁸ but EGD and barium esophagogram have a characteristic diagnostic appearance.² Nowadays the preferred diagnostic method is EGD with improved diagnostic accuracy.⁹

Criteria for diagnosis by EGD are as; small Ostia of pinhead size in the wall of esophagus which may result in short or even long strictures,⁹ orifices are between 2 and 4 mm in diameter ⁸ with its width reported to be between 1-2 mm.⁷

76% of the cases reported by Levine had associated strictures of which 69% were located in distal esophagus as is in our case. Of eleven patients with distal stricture in the above mentioned study two also had GERD with peptic ulceration⁷ most probably similar to our case.

Herter in his case series found that the lower half stricture is more prevalent¹⁰ but Halm argued against the role of gastroesophageal reflux (GER) in their strictures as he said the role of GER in the pathogenesis of stricture in patients with EIP is unclear.⁹ Herter admitted that the commonest complication of EIP is the formation of stricture and its rapid progression to severe dysphagia causing vomiting¹¹ but in our case the vomiting was due to GERD as responded to its treatment therefore his stricture was asymptomatic as he had no dysphagia as well.

Treatment is by the management of comorbidities and the underlying esophagitis with appropriate treatment of GERD.⁸ In patients with strictures endoscopic dilatation results in improvement of symptoms^{11, 12, 13} which was not indicated in our case as his stricture did not cause dysphagia.

EGD can be a good diagnostic tool for EIP provided if it is not missed by endoscopist. Vomiting because of GERD in very elderly is seen in 30% of cases but its combination with EIP is interesting as GERD is also taken as an associated condition of EIP. In the resultant stricture role of reflux and EIP is not clear. In our case as his EIPs were proximal to the stricture most probably GERD was the cause of stricture in him.

AUTHORS CONTRIBUTION

AZ contributed in the conception of the work, conducting the study, revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work. AAH revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work. BK drafting the work, approval of the final version of the manuscript, and agreed for all aspects of the work.

Acknowledgements

Writers of this article are thankful for the valuable cordial and dedicated cooperation of Clinical Research Development Unit of Velayat hospital. The corresponding author is also highly obliged for the generous services by non-profitable open-access endoscopy center of Rahimian charity hospital where he performed the esophagogastroduodenoscopy and biopsy of this case as an out-patient.

Abbreviations:

Gastroesophageal Reflux Disease (GERD)
Esophageal intramural pseudodiverticulosis (EIP)
esophagogastroduodenoscopy (EGD)
Chest Computed Tomography (CT)

REFERENCES

1. Liu SM, Wu HH, Chang KK, Tseng LJ, Han SC, Mo LR. Esophageal intramural pseudodiverticulosis complicated with stricture. J Formos Med Assoc 2010;109(3):241–4. doi: 10.1016/S0929-6646(10)60048-4.

2. Siba Y, Gorantla S, Gupta A, Lung E, Culpepper-Morgan J. Esophageal intramural pseudodiverticulosis, a rare case of food impaction: Case report and review of the literature. *Gastroenterol Rep (Oxf)*. 2015;3(2):175-8. doi: 10.1093/gastro/gou035
3. Chon YE, Hwang S, Jung KS, Lee HJ, Lee SG, Shin SK, et al. A case of esophageal intramural pseudodiverticulosis. *Gut Liver* 2011; 5:93–5. doi: 10.5009/gnl.2011.5.1.93
4. Pilotto A, Franceschi M, Leandro G, Scarcelli C, D'Ambrosio LP, Seripa D, et al. Clinical features of reflux esophagitis in older people: a study of 840 consecutive patients. *J Am Geriatr Soc*. 2006;54(10):1537-42.
5. Laporte JR, Carne X, Vidal X, Moreno V, Juan J. Upper gastrointestinal bleeding in relation to previous use of analgesics and non-steroidal anti-inflammatory drugs. *Catalan Countries Study on Upper Gastrointestinal Bleeding*. *Lancet*. 1991;337(8733):85-9.
6. Teraishi, F, Fujiwara, T, Jikuhara, A, Kamitani S, Morino Y, Sato K, et al. Esophageal intramural pseudodiverticulosis with esophageal strictures successfully treated with dilation therapy. *Ann Thorac Surg*. 2006; 82: 1119–1121.
7. Levine MS, Moolten DN, Herlinger H, Laufer I. Esophageal intramural pseudodiverticulosis: a reevaluation. *AJR Am J Roentgenol* 1986;147:1165–1170.
8. de Oliveira LL, Carneiro FO, Baba ER, Vilaca TG, Chaves DM, Artifon EL, et al. Esophageal intramural pseudodiverticulosis: a rare endoscopic finding. *Case Rep Med*. 2013;2013:154767. doi: 10.1155/2013/154767
10. Halm U, Lamberts R, Mossner J, Mössner J, Zachäus M. Esophageal intramural pseudodiverticulosis: endoscopic diagnosis and therapy. *Dis Esophagus*. 2014 Apr;27(3):230-4. doi: 10.1111/dote.12104
11. Herter B, Dittler HJ, Wuttge-Hannig A, Siewert JR. Intramural pseudodiverticulosis of the esophagus: a case series. *Endoscopy* 1997; 29:109 –13.
12. Tsuboi J, Tajika M, Nakamura T, Kawai H, Bhatia V, Takayama R, et al. Endoscopic features of short-term progression of esophageal intramural pseudodiverticulosis. *Endoscopy*. 2010; 42 Suppl 2:E92-3. doi: 10.1055/s-0029-1243915
13. W. van Laer, D. Urbain, and H. Reynaert. Esophageal intramural pseudodiverticulosis. *Clinical Gastroenterology and Hepatology* 2007;5(12):p.A22. DOI: <http://dx.doi.org/10.1016/j.cgh.2014.11.032>
14. Van der Pol RJ, Benninga MA, Bredenoord AJ, Kindermann A. Intramural pseudodiverticulosis of the esophagus: a case report. *European journal of pediatrics*. 2013;172 (12):1697-9.