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A Rare Case of Intramural Esophageal Dissection- Treated With Endoscopic Mucosal Resection

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I. Introduction

Intramural esophageal dissection is a rare clinical condition characterized by a mucosal tear and intramural extension of a false lumen. Etiologies are either iatrogenic as in esophageal instrumentation (oesophagogastroduodenoscopy and transesophageal echocardiography) as well as non-iatrogenic causes (foreign body ingestion and dissecting hematoma from anticoagulant[1]). Mechanism of occurrence is poorly understood but the theory of dissection is by injury in the mucosal layer of esophagus with further subsequent increase in intraesophageal pressure with end result of a full separation of mucosa and submucosa from the deeper muscular layers.

II. Case Presentation

A 56 years old gentleman presented with a chief complain of dysphagia to solid food with loss of weight 20 kg for the past 6 months. No previous family history of gastrointestinal cancer. On clinical examination, patient is cachexic with muscle wasting over upper and lower limb. No abdominal mass felt.

Oesophagogastroduodenoscopy (OGDS) revealed revealed circumferential complete separation of esophageal mucosa from the muscular layer, extending from upper esophagus until the cardioesophageal junction (COJ) with multiple swiss-cheese like defects on the proximal esophageal mucosa. The true esophageal lumen was being compressed by the mucosal flap and fluid accumulation in the false lumen (Figure 1 & 2) . Biopsy of mucosa showed benign squamous epithelium of esophagus. Barium esophagogram exhibited irregular esophageal mucosa with lower esophageal outpouching (Figure 3). Computer Tomography(CT) scan showed eccentric wall thickening with dissected esophageal wall (Figure 4 & 5).

Following failed conservative treatment with nasogastric tube feeding and esophageal rest, endoscopic transection of mucosal flap was performed for this patient. The mucosal flap was transected with endosurgical IT knife (Olympus, Japan), joining both false and true lumens from the proximal esophagus till the COJ (Figure 6 & 7). Nasogastric tube was then inserted into stomach for feeding purpose. Histopathological report of resected esophageal mucosa exhibited a benign stratified squamous epithelium with occasional basal cell hyperplasia.

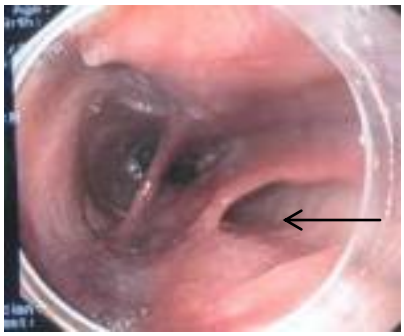

Figure 1. Desquamated esophageal mucosa. Swiss-cheese appearance(arrow)

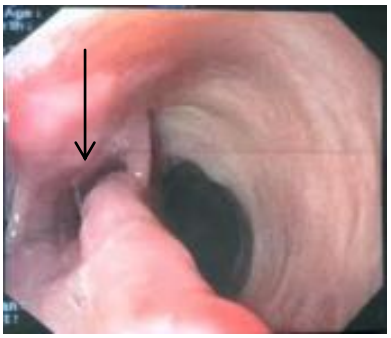

Figure 2. Circumferential mucosal separation with true lumen collapsed (arrow).

Figure 3. Outpouching distal segment esophagus (arrow).

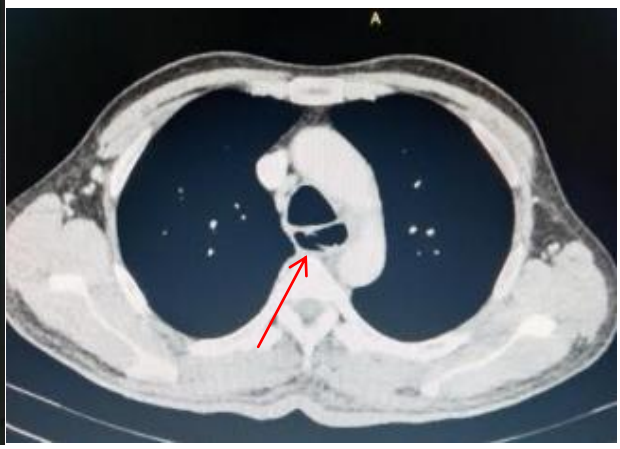

Figure 4. Eccentric esophageal wall (arrow)

Figure 5. Dissected esophageal wall (arrow)

Figure 6. Endoscopic resection esophageal mucosa true lumen (arrow)

Figure 7. Completed resection with common single channel lumen

III. Discussion

Unusual cause of intramural esophageal dissection such as eosinophilic esophagitis is proven possible[2.] Trivial cause such as eating baked potato indeed has also been described in literature [3]. Symptoms ranging from dysphagia, odynophagia, chest pain, halitosis, nausea, vomiting and loss of weight[4].

Diagnosis made based on symptoms and imaging. OGDS is the first line of investigation in which dissected mucosa can be evaluated and esophageal lumen could be properly assessed. A barium esophagogram revealed a "double-barreled" esophagus and computer tomography will reveal focal eccentric esophageal wall[5].

Conservative approach has been described in literature in which nasogastric tube was inserted for feeding with successful treatment outcome[6]. However there are also endoscopic modality described as treatment for this rare disease with an excellent outcome, if not better. Endoscopic resection of dissected mucosa and submucosa with the aim of making a single channel lumen out of true and false lumen of esophagus[7]. Another novel approach is by using glue histoacryl to obliterate false lumen after endoscopic resection mucosa[8.]
Outcomes of treatment regardless conservative or operative approach are generally excellent.

References

[1]. Soulellis CA, Hilzenrat N, Levental M. Intramucosal esophageal dissection leading to esophageal perforation: case report and review of the literature. Gastroenterol Hepatol (N Y). 2008;4(5):362-365.
[2]. Garaigorta et al., J Genet Syndr Gene Ther 2014, 5:1Circumferential Esophageal Dissection Treated Conservatively in a Young Patient with Eosinophilic Esophagitis
[3]. Giao Q. Phan, BA, and Richard F. Heitmiller Intramural Esophageal Dissection.Ann Thorac Surg 1997;63:1785–6
[4]. Abdi S, Baianati MR, Momtahen M, Mohebbi B. Intramural Esophageal Dissection: A Rare Cause of Acute Chest Pain after Percutaneous Coronary Intervention. J Tehran Heart Cent. 2019;14(3):138-140.
[5]. Hsu CC, Changchien CS. Endoscopic and radiological features of intramural esophageal dissection. Endoscopy. 2001 Apr;33(4):379-81
[6]. Ryoung Eun Ko, Won Sik JungManagement of Intramural Esophageal Dissection with Gastric Feeding Tube in an Alcoholic-hepatitis PatientKorean J Gastroenterol. 2016 Jan;67(1):35-38. Korean.
[7]. Cho, Chang-Min M.D.; Ha, Seung-Soo M.D.; Tak, Won-Young M.D.; Kweon, Young-Oh M.D.; Kim, Sung-Kook M.D.; Choi, Yong-Hwan M.D.; Chung, Joon-Mo M.D. Endoscopic Incision of a Septum in a Case of Spontaneous Intramural Dissection of the Esophagus, Journal of Clinical Gastroenterology: November-December 2002 - Volume 35 - Issue 5 - 387-390
[8]. Chih-Hsien Wang, Ping-Huei Tseng. Vol 6,Issue1 ,March 2019: 32-35 Spontaneous intramural esophageal dissection preceded by intramural esophageal hematoma.

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