OLGU SUNUMU CASE REPORT

DOI: 10.5336/medsci.2018-61258

Esophageal Fibroma That Envelops Esophagus and Causes Traction Diverticulum

Özofagusu Çepeçevre Saran ve Traksiyon Divertikülüne Neden Olan Özofageal Fibrom

Vedat BAYRAK[a],
Habil TUNÇ[b],
Necmi YÜCEKULE[a],
Nazmi ÖZER[a]

Clinics of
[a]General Surgery,
[b]Thoracic Surgery,
Adana Ceyhan State Hospital,
Adana, TURKEY

Received: 30.04.2018
Received in revised form: 30.11.2018
Accepted: 03.12.2018
Available online: 02.01.2019

Correspondence:
Vedat BAYRAK
Adana Ceyhan State Hospital,
General Surgery, Adana,
TURKEY/TÜRKİYE
stmfhl@hotmail.com

ABSTRACT Benign tumors and diverticulums of the esophagus are rarely seen pathologic conditions. Patients usually admit to the polyclinics with complaint of difficulty in swallowing. Traction diverticulums are usually diverticulums that are formed due to inflammatory reasons and found in midesophageal region. In this presentation, we aimed to present distal esophageal traction case that is not a result of inflammatory reasons but caused by a rare benign esophageal tumor called fibroma.

Keywords: Esophagus; esophageal motility disorders; fibroma; diverticulosis

ÖZET Özofagus benign tümörleri ve divertikülleri nadir görülen patolojilerdir. Hastalar sıklıkla yutma güçlüğü şikayeti ile polikliniğe başvururlar. Traksiyon divertikülleri genellikle inflamatuar nedenlerle oluşan ve midözofageal bölgede görülen divertiküllerdir. Biz bu sunuda inflamatuar nedenli olmayan, nadir bir benign özofageal tümör olan fibrom nedeniyle oluşan ve distal özefageal yerleşimli traksiyon divertikülü vakasını sunmayı amaçladık.

Anahtar Kelimeler: Özofagus tümörleri; özofageal divertikül; fibrom; özofageal motilite bozuklukları

Esophagus benign tumors are rarely seen pathologies. They are usually asymptomatic unless they cause luminal obstruction or tracheobronchial aspiration. Most frequent symptom is dysphagia. Odynophagia, regurgitation, chest pain are the other symptoms. Most common benign tumor is leiomyoma. The fibromas are the most rare among the benign tumors (Table 1).[1]

Esophageal diverticuli are also rarely seen and show similar symptoms with benign tumors. The size of the diverticulum can determine the intensity of the symptoms.[2] Esophageal diverticuli are cathegorized as traction or pulsion diverticuli according to their etiology. Traction diverticuli usually form because of adhesions of inflammating lymph nodes around esophagus because of tuberculosis or histoplasmosis. Pulsion diverticuli are formed because of esophageal motility disorder. However the exact etiology may not be diagnosed.[3] In this presentation we aimed to present the association between fibroma and epiphrenic traction diverticulum that envelops the esophagus and causes swallowing difficulties. Consent was obtained from the patient for scientific use.

TABLE 1: Classification of benign esophageal tumors.

Epithelial Tumors
Papillomas
Polyps
Adenomas
Cysts
Nonepithelial Tumors
Myomas
Leiomyomas
Fibromyomas
Lipomyomas
Fibromas
Vascular tumors
Hemangiomas
Lymphangiomas
Mesenchymal and other tumors
Reticuloendothelial tumors
Lipomas
Myxofibromas
Giant cell tumors
Neurofibromas
Osteochondromas
Heterotopic Tumors
Gastric mucosal tumors
Melanoblastic tumors
Sebaceous gland tumors
Granular cell myoblastomas
Pancreatic gland tumors
Thyroid nodules

From Nemir P Jr, Wallece HW, Fallahnejad M. Diagnosis and surgical management of benign disease of the esophagus. *Curr Probl Surg* 1976;13(3):1-74, with permission.

CASE REPORT

A 68 year old female patient who came to general surgery clinic with swallowing difficulties and retrosternal burning was examined. There were no signs in the physical examination except mild obesity. There were no extra diseases except controlled hypertension under antihypertensive treatment and biochemical tests were normal. Endoscopic examination revealed a wide mouth diverticulum at 32-33rd cm of the esophagus and at the same level of diverticulum normal amount of mucosa and tightness caused from outer pressure was observed. The patient was scanned with abdominothoracic computerized tomography (CT). In the CT at the 1/3 distal end of the esophagus, a 5-6 cm sized mass lesion that envelops esophagus with regular border was observed with esophageal diverticulum at the same level. and esophagus diverticulum at the same level (Figure 1, Figure 2).

Left thoracotomy was done on the patient. It was seen that the mass has surrounded the esophagus all around (Figure 3).

The mass was enucleated (Figure 4). It was observed that diverticulum was removed from the esophagus muscles during the enucleation and the traction diverticulum was pulled towards the mass. Diverticulectomy with linear stapler was done in diverticulum and the muscles were brought closer anatomically. The patient's postoperative 5th day naso-gastric catheter was taken out and oral was started. Postoperative 6th day chest tube was taken out. On the 8th postoperative day, the patient was discharged with healing. At the postoperative 2nd week control, it was seen that the complaitns regressed. The patient was followed-up whase pathology result was fibroma. The consent was obtained from the patient for scientific use.

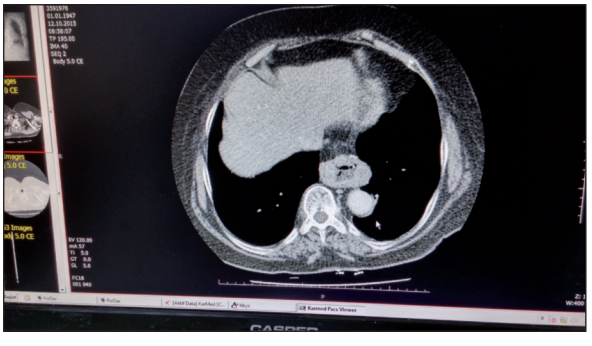

FIGURE 1: CT image, Axial view.

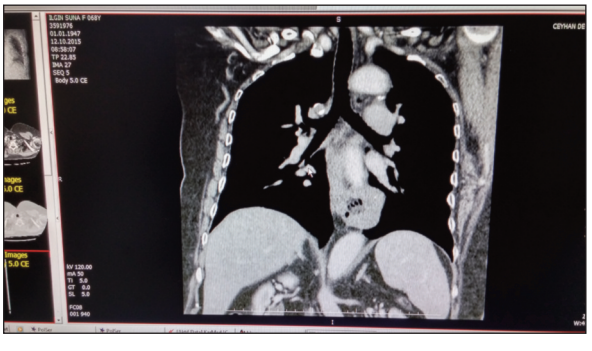

FIGURE 2: CT image, Coronal view.

FIGURE 3: Operation image.

FIGURE 4: Specimen image.

DISCUSSION

Esophagus benign tumors and their diverticulums are rarely seen pathologies. They are generally asymptomatic. They give symptoms when they perform obstruction or tracheobronchial aspiraton in the lumen. The most common symptom is difficulty in swallowing. Except difficulty in swallowing, some symptoms such as odynophagia, regurgitation, retrosternal burning, halitosis can be seen. Our patient consulted with increasing complaints of difficulty in swallowing and retrosternal burning, no other pathological symptoms were found. Weight loss wasn't seen despite difficulty in swallowing.

The most common benign esophageal tumors are leiomyomas. Fibromas are the second most common. In a seriesof 53 patients with esophageal tumors, 29 patients had leiomyoma and 19 had fibroma.[4]

Esophagus diverticulums are also rare seen patholgies. According to their localizations, they are divided into 3 groups as pharyngoesophageal (Zenker's diverticulum), midesophageal or parab ronchial, and distal esophageal or epiphrenic diverticulums. According to etiopathogenesis, they are examined in 2 groups as traction diverticulum and pulsion diverticulum.[5] Traction diverticulums usually ocur around the esophagus anda re caused by the adhesion of lymph nodes that are inflamed due to tuberculosis or histoplasmosis.[6] Traction diverticulums are usually located in the midesophageal region. But in our case, unlike the general characteristics of traction diverticulum, diverticulum distal was located esophageal and there was no inflammatory disease like tuberculosis or histoplasmosis. The cause of the traction was a rare esophageal fibroma.

For the diagnosis of benign esophageal lesions barium esophagography, computed tomography of the thorax (CT), magnetic resonance examination (MR) esophagoscopies and esophageal ultrasonography imaging techniques are used. The gold standart diagnostic method in esophageal diverticulum is endoscopy. Endoscopy has the advantages of detecting diverticulum, detecting malignancy which may develop on the basis of diverticulum, interfere with bleeding from diverticulum.[7] Esophageal ultrasonography provided more detailed information about the exact loction and nature of the lesion. With these two tests, some informations can be obtained about the locationof the lesion between the wall layers, cystic-solid separation, the relationship between the lesion and paraesophageal tissues and the surrounding lymph nodes. Thorax at CT, is useful for demonstrating the lesion and evaluating its relationship with environmental structures. In our

case, epiphrenic diverticulum was seen with esophagoscopy and in CT, that was taken to evaluate the environmental structures, a well-circumscribed mass surrounding the esophagus was detected. Surgical decision was made without any necessity of other imaging methods.

In the differential diagnosis of esopghageal lesions, esophagus cancer, lymphadenopathies, mediastinal cysts and tumors should be included.

Epiphrenic diverticulums are located in the distal 10 cm area of the esophagus. It often causes symptoms such as dysphagia, odinophagia, regurgitation, chest pain (heartburn), halitosis, weight loss, caugh, aspiration pneumonia. Less frequently, it may also cause complications such as ulceration, bleeding in diverticulum, esophageal perforation, carcinoma of the diverticulum. At the pathophysiology, distal esophagus or the lower esophageal spincter's functional obstruction which results from the dysfunction of the motility are charged. However, it's known that mechanical obstruction causes such as Nissen funduplication, peptic stenosis, gastroesophageal region tumors are also involved in pathophysiology.[8] In our case, there were symptoms os retrosternal burning and difficulty in swallowing but the patient didn't have any weight loss. In our patient, the surgical decision was made without any need for manometric study because the mass surrounding the esophagus was detected in CT. It's understood that there is no motility disorder of the patient whose complaints disappeared in the postoperative period. It's understood that the epiphrenic diverticulum occured because of the fibroma which causes mechanical obstruction and also traction.

Asymptomatic epiphrenic diverticula doesn't require treatment. On 35 patient with asymptomatic epiphrenic diverticula, no significant progression was observed in 9 year follow-up.[9] However, both symptom formation and surgical treatment are inevitable in epiphrenic diverticulum caused by mechanical obstruction. In esophageal fibroma cases, first of all enucleation by thoracoscopy/open thoracotomy should be tried, if it's failed resection and end-to-end anastomose shoud be applied. We considered that the approach with the thoracotomy is suitable for both intervening the mass surrounding the esophagus and diverticulum excision. Fibroma was enucleated with left thoracotomy and esophageal muscles were closed after doing diverticulectomy with linear stapler.

Whether esophageal diverticulum or esophagus benign tumors are rarely seen pathologies, they cause clinical problems such as bleeding, painful swallowing, malnutrition and weight loss. Although traction diverticulums are mostly known to occur because of the inflammatory causes, as in our case, it should be kept in mind that it may cause traction diverticulum in benign esophageal tumors and this situation should be considered in the diagnosis/examination phase.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Vedat Bayrak, Habil Tunç;* ***Design:*** *Vedat Bayrak, Necmi Yücekule;* ***Control/Supervision:*** *Vedat Bayrak, Habil Tunç, Necmi Yücekule, Nazmi Özer;* ***Data Collection and/or Processing:*** *Vedat Bayrak, Habil Tunç, Necmi Yücekule, Nazmi Özer;* ***Analysis and/or Interpretation:*** *Vedat Bayrak, Habil Tunç, Necmi Yücekule, Nazmi Özer;* ***Literature Review:*** *Vedat Bayrak, Nazmi Özer;* ***Writing the Article:*** *Vedat Bayrak, Nazmi Özer;* ***Critical Review:*** *Vedat Bayrak, Habil Tunç, Necmi Yücekule, Nazmi Özer;* ***References and Fundings:*** *Vedat Bayrak, Habil Tunç, Necmi Yücekule, Nazmi Özer;* ***Materials:*** *Vedat Bayrak, Habil Tunç.*

REFERENCES

1. Sayek İ. Temel Cerrahi. 3. Baskı. Ankara: Güneş Kitabevi; 2004. p.2407.
2. Melman M, Quinlan J, Robertson B, Brunt LM, Halpin VJ, Eagon JC, et al. Esophageal manometric characteristics and outcomes for laparoscopic esophageal diverticulectomy myotomy, and partial fundoplication for epiphrenic diverticula. Surg Endosc. 2009;23(6):1337-41. [Crossref] [PubMed]
3. Fernando HC, Luketich JD, Samphire J, Alvelo-Rivera M, Christie NA, Buenaventura PO, et al. Minimally invasive operation for esophageal diverticula. Ann Thorac Surg. 2005;80(6):2076-80. [Crossref] [PubMed]
4. Utkin VV, Ambalov GA. [Benign tumors of the esophagus]. Grudnaia i Serdechno-sosudistaia Khirurgiia. 1991;(12):45-8. [PubMed]
5. Ahıshalı E, Dabak R, Dolapçıoğlu C, Ak Ö, Bayramiçli OU. [Esophageal diverticula]. Akademik Gastroenteroloji Dergisi. 2009;8(1): 29-31.
6. Hadi U, Rameh C. Giant midesophageal diverticulum presenting as food impaction: case report and review of the literature. Am J Otolaryngol. 2007;28(2):122-5. [Crossref] [PubMed]
7. Tse CS, Parikh ND. An uncommon source of upper gastrointestinal bleeding: epiphrenic esophageal divertiulum. Gastroenterol Rep (Oxf). 2017;5(4):313-5.
8. Clark SC, Norton SA, Jeyasingham K, Ridley PD. Oesophageal epiphrenic diverticulum: an unusual presentation and review. Ann R Coll Surg Engl. 1995;77(5):342-5. [PubMed] [PMC]
9. Benacci JC, Deschamps C, Trastek VF, Allen MS, Daly RC, Pairolero PC. Epiphrenic diverticulum: results of surgical treatment. Ann Thorac Surg. 1993;55(5):1109-13. [Crossref]