

A Mini Review of Benign Esophageal Neoplasms

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Abstract

Benign esophageal lesions are rarely seen. Leiomyomas are the most common benign esophageal tumor. Most of the lesions are asymptomatic. The diagnosis is usually made incidentally during the investigation of different pathologies. It was also incidentally found in many autopsy series.

Symptomatic lesions are often intramural or intraluminal and usually present with difficulty in swallowing. Bleeding, vomiting, retrosternal discomfort, and airway obstruction secondary to compression into the adjacent airways can rarely be seen.

While endoscopic resection is preferred for the treatment of intraluminal lesions, usually with epithelial-origin; endoscopic or surgical resection/enucleation are among the accepted treatment methods for intraluminally located, often mesenchymal originated lesions.

Keywords: *Esophagus; Benign Neoplasm; Mesenchymal Neoplasm; Epithelial Neoplasm*

Introduction

Unlike the malignancy of esophagus, its benign neoplasms are seen much less frequently. In the literature, it has been reported benign lesions were seen less than 1% in the past autopsy series, and it accounted for less than 5% of all esophageal tumors in surgical resection specimens [1,2].

A certain increase in the diagnosis of esophageal benign lesions is mentioned in recent years, with the increase in the applicability of radiological imaging methods and endoscopic interventions. These lesions are usually asymptomatic, often incidentally detected and can be followed with close follow-up without any interventional/surgical operation. If the lesion is symptomatic or there is doubt in terms of malignancy, it is reported that resection should be performed [1].

Classification

There are various classifications for benign esophageal tumors. It is usually histopathologically performed according to cell type and lesion location [3] (Table 1). The majority of benign esophagus lesions are found in the middle and lower 1/3 of the esophagus. Fibrovascular polyps are more common in the upper 1/3 of the esophagus.

Based on cell type	Based on localisation
<p>*Epithelial lesions</p> <ul style="list-style-type: none"> • Squamous papilloma • Polyp • Adenoma • Inflammatory pseudopolyp • Inflammatory polyp (Secondary due to reflux) 	<p>*Intraluminal lesions</p> <ul style="list-style-type: none"> • Polyp • Squamous papilloma
<p>*Nonepithelial lesions</p> <ul style="list-style-type: none"> • Leiomyoma • Hemangioma • Fibroma • Neurofibroma • Schwannoma • Rhabdomyoma • Lipoma • Lymphangioma • Hamartomas • Gastrointestinal stromal tumors (GIST) 	<p>*Intramural lesions</p> <ul style="list-style-type: none"> • Leiomyoma • Rhabdomyoma • Lipoma • Hamartoma • Hemangioma • Granular cell tumor • Neurofibroma
<p>*Heterotopic lesions</p> <ul style="list-style-type: none"> • Granular cell tumor • Chondroma • Osteochondroma • Giant cell tumor • Amyloid tumor • Eosinophilic granuloma 	<p>*Extramural lesions</p> <ul style="list-style-type: none"> • Duplication cysts

Table 1: Classification in Benign Esophageal Lesions (The classification of Choong., et al. was used [4]).

Clinic

About half of the benign esophageal lesions are asymptomatic and are usually incidentally detected. They are slow growing masses and can remain silent for many years without any clinical signs.

According to the studies reported in 2003 and 2015, benign esophagus lesions could present with the following clinical findings; 1- Asymptomatic, 2- Hemorrhage, 3- Lumen obstruction secondary to intraluminal growth, 4- Compression from the extraluminal region, 5- Regurgitation of the pedunculated lesion [1,4].

In these cases, the most common clinical presentation is dysphagia and the degree of dysphagia is related to the size of the lesion. The second most common clinical presentation is pain in the retrosternal-epigastric region; pyrosis. Generally, as the size of the lesion increases, the likelihood of the appearance of these clinical manifestations increase and they are usually seen in lesions of 5 cm or more.

Obstructive symptoms mostly occur in intraluminal lesions. Although very rare, obstructive symptoms may be seen in the presence of circumflexial-annular lesions as well [5]. In rare cases, the lesion has been reported to cause respiratory symptoms secondary to tracheal or bronchial compression [6].

Diagnosis

Generally, benign esophageal lesions are detected incidentally during imaging or endoscopy. On plain chest radiography, it is more likely that masses with a paraesophageal extramural location are seen [1].

High-density and low-density barium esophagography are one of the best diagnostic methods for the evaluation of these patients. High-density barium radiography performed with swallowing can better evaluate the mucosa of the lumen, while low-density barium radiography can better evaluate the location of the obstruction in the lumen [7].

Computed tomography (CT) is a good option for evaluating the masses in the paraesophageal area [8].

Although it is not expected to see an evident mucosal lesion with submucosal lesions with endoscopy and endoscopic ultrasound (EUS), a mass protruding towards the lumen can be observed. Evaluation of the mucosa in terms of intraluminal lesions, as well as the evaluation of submucosal lesions, and sometimes biopsy with EUS, were valuable in terms of cyto-histopathological examination [9].

Management of lesions

In the past, resection of all lesions, including benign lesions of the esophagus, was recommended. However, the clinical and radiological follow-up of cases is now easier to follow-up, and the non-symptomatic masses that will not undergo malignant transformation are recommended to be followed-up.

Resection is recommended if the lesion is symptomatic or has malignant transformation. In recent years, less invasive methods such as endoscopic, thoroscopic or laparoscopic resections have been developed and resection has been made easier in these cases.

Intramural lesions

Leiomyoma is a benign tumor originating from smooth muscle cells in the muscularis propria layer of the esophagus. It is the most common benign esophageal tumor and it accounts for 70% of the lesions in the esophageal intramural region among the benign lesions [10]. When the entire gastrointestinal system is examined, the ratio of esophagus-based leiomyomas is approximately 1/10. It is more common in males than females and occurs between the ages of 2 and 50. Clinically, it presents as a well-defined, mobile submucosal mass in the middle-lower esophagus. In the presence of leiomyoma, resection is recommended even if it is asymptomatic. Surgical enucleation is reported as the most appropriate treatment model to be preferred [10].

Hemangioma is less common in esophageal benign lesions. These lesions are usually localized in the upper esophagus. It is typically submucosal and asymptomatic. As it is a vascular lesion, it usually presents as hematemesis or melena as a symptom. Treatment, according to the clinical condition of the patient, may be in the form of endoscopic, surgical resection or sclerotherapy [10].

Lipoma is seen the least in the esophagus when the whole gastrointestinal tract is evaluated. Lipomas are smooth, submucosally located, yellow colored, mobile lesions. It could be followed up if it is asymptomatic, but endoscopic or surgical resection should be performed if there is suspicion with the diagnosis or it is symptomatic [11].

Less frequently, fibroma, neurofibroma are extremely rare benign lesions. These lesions can be confused with the other benign intramural submucosal lesions because they generally present as a smooth circumscribed mobile mass [12]. The treatments are similar, to all other intramural-submucosal localized masses.

Granular cell tumors (GCT) of the esophagus have been reported to be the third most common benign lesions. These small, yellow lesions can also be found in many organs. It is most commonly localized in the esophagus in the gastrointestinal tract. It has been reported that this tumor originates from Schwann cells [13].

Esophageal heterotopia, meaning choristoma cases, are very rare. They are usually intramural. Heterotopy cases such as bone, pancreas, stomach and thyroid have been reported. The cases of rhabdomyoma, inflammatory pseudotumor and lymphangioma are also rare in the esophagus [14,15].

Intraluminal lesions

These lesions usually grow into the lumen, often with epithelial origin, rarely protruding into the lumen; submucosal intramural lesions may also be included in this group. However, if we look at mainly epithelial lesions, esophageal polyps may include long pedunculated, poor in muscle tissue, histopathologically fibrous, vascular, fat or nerve tissues. These lesions may present with ulcers and bleeding. Therefore, endoscopic removal will be the best option [16].

Papilloma, which is another epithelial lesion, is rare, sessile, sometimes multiple, irregular, rough-looking lesions. While it can be due to reflux, it could also occur due to the Human Papilloma Virus. In the literature, cases of squamous cell carcinoma developed from papilloma have been reported. Therefore, it is recommended to remove the lesion endoscopically with biopsy [17].

Conclusion

Benign esophageal lesions are rarely seen. Leiomyomas are the most common benign esophageal tumor. Most of the lesions are asymptomatic. The diagnosis is usually made incidentally during the investigation of different pathologies. In addition, it was identified incidentally in many autopsy series.

Symptomatic benign masses are usually intramural or intraluminal masses and often present with difficulty in swallowing. Bleeding, vomiting, retrosternal discomfort, and airway obstruction secondary to compression into the adjacent airways can rarely be seen.

While endoscopic resection is preferred for the treatment of intraluminal lesions, usually with epithelial origin; endoscopic or surgical resection/enucleation are among the accepted treatment methods for intraluminally located, often mesenchymal originated lesions.

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None.

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