Oesophageal leiomyoma

An oesophageal lesion was revealed during oesophagoscopy performed to investigate a 3 months history of pyrosis.

Imaging Findings:

A 58 year old female presented to our department with an oesophageal lesion revealed during oesophagoscopy performed for her three months history of pyrosis. The endoscopy revealed also a hiatal hernia. Double contrast oesophagogram showed a filling defect approximately 16 mm in length, localized at the lower third of the oesophagus. Oesophagograms demonstrated the absence of irregularity of the overlying mucosa and of obstruction to the flow of barium. The barium swallow showed also the hiatal hernia with oesophageal reflux that most likely was the reason of pyrosis.

CT was performed and demonstrated an intramural parenchymatous nodular lesion in the distal part of the oesophagus with significant and homogeneous contrast enhancement. Its diameters were 16x21x12 mm.

Discussion:

Leiomyomas are the most common benign mesenchymal neoplasms of the oesophagus and constitute 0.4-1.5% of all tumours of this organ. These tumours are usually found in middle age patients and are almost twice as common in men. Oesophageal leiomyomas are multiple in approximately 5% of patients. Leiomyomas may occur in all parts of the oesophagus, but 60% occur in the distal third, 30% in the middle, and 10% in the proximal oesophagus. They are typically oval or spherical. These tumours have an intramural location but some may be present near the oesophageal diverticula or grow intramurally as a pedunculated polyp. Oesophageal leiomyomas rarely cause symptoms when they are smaller than 5 cm in diameter. Large tumours can cause dysphagia, vague retrosternal discomfort, chest pain, oesophageal obstruction and reflux. Rarely they can cause gastrointestinal bleeding, with erosion through the mucosa. Histologically, leiomyomas comprise of bundles of interlacing smooth muscle cells, well demarcated by adjacent tissue or by a definitive connective tissue capsule. They are composed of fascicles of spindle cells that tend to intersect with each other at varying angles. The tumor cells have blunt-ended elongated nuclei and show minimal atypia with few mitotic figures. They may undergo cystic degeneration; calcifications occur infrequently and malignant change is rare. The significance of knowing about leiomyomas is due to the fact that it can mimic oesophageal cancer and lead to diagnostic confusion.

The two essential investigations for diagnosis of oesophageal leiomyoma are oesophagograms and oesophagoscopy. CT also plays an important role for assessing the exact extension and size of these tumours. Oesophageal leiomyoma can be visualized using barium swallow. The classic appearance is a smooth convex mass
underlying the intact mucosa. Distinct obtuse angles are seen at the junction of the tumour and normal tissue. Encroachment onto the oesophageal lumen usually is observed. The tumour is usually mobile during swallowing. At endoscopy, the lesions are identified as mobile submucosal masses. If a leiomyoma is suspected at oesophagoscopy, a biopsy should not be performed as it would cause scarring at the biopsy site, which would hamper definitive extramucosal resection at surgery. However, an ulcerated growth should be biopsied to rule out malignancy.

Even where contrast medium is administered, CT reveals a lesion, which demonstrates homogeneous low or iso-attenuation.

Oesophageal ultrasonography can be helpful in demonstrating a smooth, typically round, mass located in the muscularis without encroachment into the overlying mucosa or underlying adventitia. Symptomatic and large leiomyomas should be treated surgically while small, asymptomatic lesions may be managed by regular follow up and repeated endoscopies.

**Differential Diagnosis List:** Esophageal leiomyoma.

**Final Diagnosis:** Esophageal leiomyoma.

**References:**

Figure 1

Description: Double contrast oesophagogram shows a filling defect extended for about 16 mm in length, in the distal esophagus caused by a mass. There is no obstruction and overlying mucosa is intact. Origin:
Description: Portal-phase: CT image shows an intramural nodular lesion in the distal part of the oesophagus with homogeneous contrast enhancement. Origin:
Description: Delayed-phase lesion shows an homogeneous and conspicuous enhancement. Origin:
Description: Coronal MPR reconstruction. The lesion extended for 16 mm in the craniocaudal dimension. An angioma is also visible in the IV hepatic segment. Origin: