Introduction: Esophageal submucosal tumors (SMTs) are very rare, with prevalence of 0.5% in autopsy series. Among them leiomyomas are the most common, they originate from the muscularis propria (4th EUS layer) or muscularis mucosa (2th EUS layer) of the esophageal wall. Submucosal lesions of the upper third is very rare and occur in 4% of cases. Submucosal tunneling endoscopic resection (STER) and endoscopic submucosal dissection (ESD) are modern techniques for treating SMTs. The choice between them depends on layer of origin of the tumor.

Methods: In this study we included 2 patients with SMT of the upper third of the esophagus. For diagnostics we used esophageal symptoms questionnaire, endoscopic ultrasonography (EUS) and computed tomography (CT) to determine layer of origine, size and relation of lesions to the surrounding structures and organs. Esophageal manometry were used to identify problems with movement and pressure in the esophagus. Immunohistochemistry and histological analysis were performed postoperatively.

Results: Both patients were asymptomatic, tumors were found accidently during routine esophagoscopy. Although in both cases manometry of the esophagus revealed increased distal latency (DL) comaring with mean value in patient without esophageal SMT. In the first case tumor arised from 4th EUS layer, hence we used STER, subcutaneous emphysema of the neck occured during operation. In the second case lesion originated from 2th EUS layer, therefore ESD was performed. En bloc resection was achieved in both cases, histological diagnoses were leiomyomas.

Conclusion: Upper third of the esophagus is the most difficult location for performing endoscopic techniques. Determination of the layer of origin is crucial, as on that depends the choice of treatment tactics. Increased DL in such patients requires further study.

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References