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# *Leiomyoma of the cervical esophagus: a case report*

Leiomyomas constitute 0.4–1.5% of all esophageal neoplasms (4). However their real frequency is probably higher due to the increasing occurrence of minute leiomyomas (dimension <0.7 cm) reported recently especially in older patients (5). The average age of patients with clinically detectable leiomyomas is 40–50 years (4). They are more common in males (4,5). As a rule gross leiomyomas are single lesions (97%), but minute ones are frequently multiple (26–40%) (4,5). Leiomyomas are usually located in the distal or in the middle esophagus (89%), whereas cervical localisation is rare (2,4,5). The majority of leiomyomas are intramural tumours (97%), although polypoid lesions or mediastinal outgrowth were also described (4).

A case of an asymptomatic, small, polypoid leiomyoma of the cervical esophagus which was removed by endoscopic electroresection is presented in the study.

## CASE DESCRIPTION

A 53-year-old woman was admitted on May 8, 2002 with a four years history of right epigastric pain, meteorism and constipation. She also complained of heartburn and bitter eructation, especially after meals. The physical examination did not found any abnormalities and the laboratory findings were unremarkable. Ultrasonography showed multiple gallstones. Esophagoscopy unexpectedly revealed a polypoid tumour 1.5 cm in diameter located at 15.0 cm from the incisor teeth as well as hiatal hernia and multiple, linear erosions in the lower esophagus. Laparoscopic cholecystectomy and endoscopic electroresection of the esophageal tumour were performed. The postoperative course was uneventful and the patient remains well seven months after resection.

The esophageal lesion was firm and whitish on the cross section. The microscopic examination revealed a well circumscribed tumour partly covered by intact mucosa and submucosa and composed of interlacing bundles of spindle cells with elongated cigar-shaped nuclei without pleomorphism (Fig.1). No mitotic activity or necrosis was found. The tumour also revealed positive immunostaining for vimentin (clone V9), desmin (clone D33) and α-smooth muscle actin (clone 1A4), whereas negative for CD117 (polyclonal), S100 protein (polyclonal) and cytokeratin (clone MNF-116) using peroxidase-labelled streptavidin-biotin complex technique (LSAB2/HRP kit; all reagents from DAKO, Denmark). On the basis of histological and immunohistochemical examinations the diagnosis of leiomyoma was established. The routine examination of gallbladder showed chronic inflammation with fibrosis.

## DISCUSSION

Leiomyomas are the most common benign mesenchymal tumours of the esophagus (4). Minute leiomyomas are subclinical, whereas gross, especially large lesions can be the cause of dysphagia, retrosternal pain, pyrosis, loss of body weight and haemorrhages (1,2,4,5). However it is estimated that at least half of the patients with gross leiomyomas are asymptomatic, despite relatively large dimensions of tumours and considerable obstruction of the esophageal lumen (2,4).

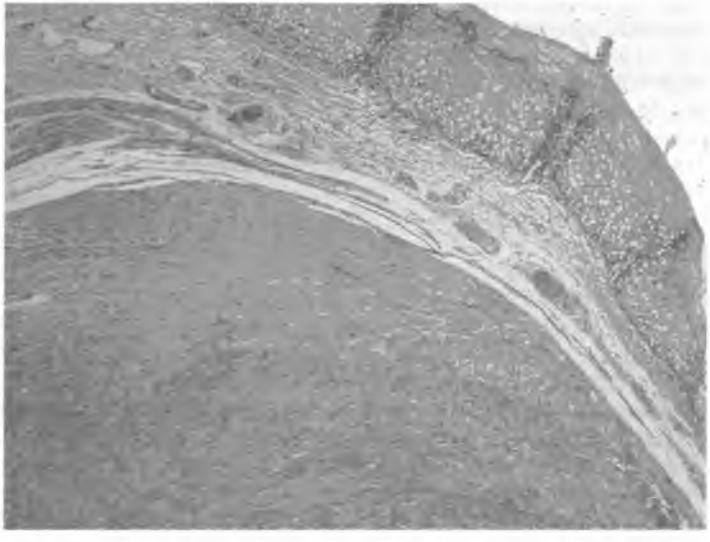

Fig.1 Esophageal leiomyoma. Well circumscribed tumour composed of bundles of spindle-shaped smooth muscle cells covered by esophageal mucosa and submucosa. Hematoxylin and eosin stain. Magn. x100

Nowadays, the diagnosis of esophageal leiomyomas is based on chest radiography with barium swallow, esophagoscopy with biopsy, computed tomography (CT) and endoscopic ultrasonography (EUS) - 1,2,4. The tissue samples taken during endoscopy may be adequate to correct histopathological diagnosis; however, since the tumours are located intramurally, the samples can be too superficial and may contain only esophageal mucosa without neoplastic tissue (2). Therefore, histopathology is not always efficient in preoperative diagnosis.

Esophageal leiomyomas can arise from smooth muscle cells or their precursors of muscularis propria, muscularis mucosae or blood vessels (5). However, precise assessment of the original site of the majority of esophageal leiomyomas is not possible due to their large dimensions (5). It seems that in the case described in the study the leiomyoma arose from muscularis propria of the esophagus. The differential diagnosis of leiomyomas includes other mesenchymal neoplasms, i.e. leiomyosarcoma, granular cell tumour, gastrointestinal stromal tumour (GIST), lipoma, fibroma, angioma, shwannoma as well as squamous cell carcinoma and non-neoplastic conditions, e.g. inflammatory polyp (2,3,4). Histological features like infiltrative growth pattern, cellular atypia, hypercellularity and mitoses are typical of leiomyosarcomas, but necrosis or ulceration are not a distinctive mark (2,3). The immunohistochemistry is necessary for excluding other nonepithelial

tumours (2,3). Leiomyomas should also be differentiated clinically with hiatal hernia, esophageal diverticula and mediastinal tumours, cysts, aneurysms and granulomatous inflammations (4).

The therapeutic approach in esophageal leiomyomas includes surgical enucleation or endoscopic electroresection of the tumour and esophagectomy in large, multiple or suspected cases (1,2). The results of the treatment of esophageal leiomyomas are generally excellent (2, 4).

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## SUMMARY

Leiomyomas are the most common benign mesenchymal neoplasms of the esophagus and constitute 0.4–1.5% of all tumours of this organ. We present a case of a 53-year-old woman with a single, small leiomyoma located in the cervical esophagus. The lesion was asymptomatic and unexpectedly revealed during esophagoscopy. The endoscopic electroresection of the tumour was performed. The patient remains well seven months after resection. The microscopic examination found a well circumscribed tumour composed of interlacing bundles of spindle cells with elongated cigar-shaped nuclei without pleomorphism showing positive immunostaining for desmin and α-smooth muscle actin.

Mięśniak gładkokomórkowy szyjnego odcinka przełyku: opis przypadku

Mięśniaki gładkokomórkowe są najczęstszymi nowotworami mezenchymalnymi przełyku i stanowią 0,4–1,5% wszystkich guzów tego narządu. Przedstawiamy przypadek 53-letniej kobiety z pojedynczym, niewielkim mięśniakiem gładkokomórkowym, położonym w szyjnym odcinku przełyku. Zmiana była bezobjawowa i została przypadkowo wykryta podczas ezofagoskopii. Wykonano endoskopową elektroresekcję guza. Pacjentka jest w dobrym stanie w siedem miesięcy po resekcji. W badaniu mikroskopowym stwierdzono wyraźnie ograniczony guz, składający się z przeplatających się pęczków komórek wrzecionowatych, wykazujących dodatni odczyn immunohistochemiczny na desminę i α-aktynę mięśni gładkich.