

## Esophageal diverticulosis

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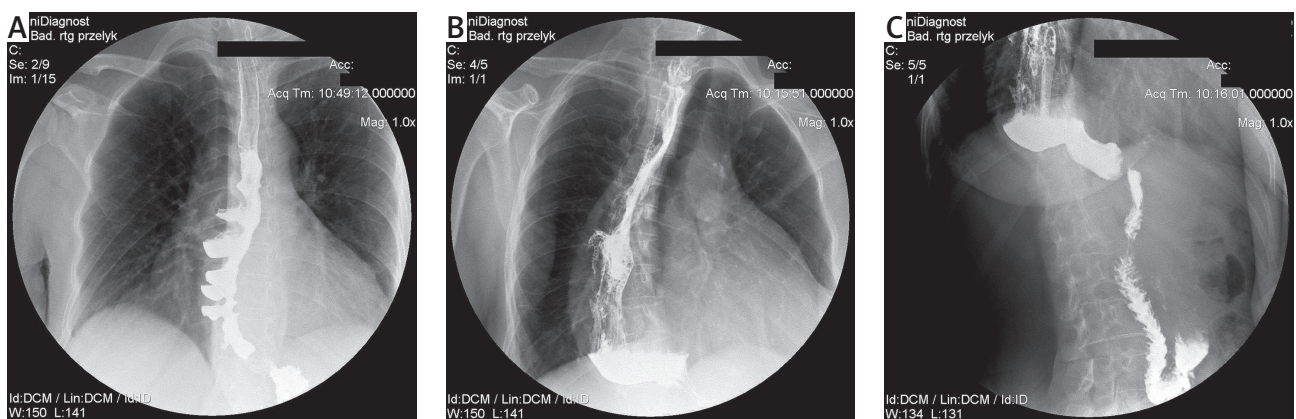


Esophageal diverticula occur with a frequency of 2/100,000/year. The most common location of acquired single diverticula is the cervical part of the esophagus, which mainly concerns patients in the 7<sup>th</sup> decade of life [1]. Multiple diverticula of the middle part of the esophagus are a rare condition and occur with a frequency of 1/500,000/year [2].

A 49-year-old woman was admitted to the hospital due to solid food dysphagia associated with retrosternal pain, malnutrition and loss of 8 kg of weight during the last year. Her weight was 47 kg and body mass index (BMI) 19.56 kg/m<sup>2</sup> at the time of admittance. The symptoms of the disease had been developing gradually for a few years. Diverticulosis of the thoracic part of the esophagus had been confirmed endoscopically 3 years ago before hospitalization. She had received steroids for a long time due to systemic lupus erythematosus (SLE). The steroid treatment was complicated with side effects such as osteoporosis and loss of menstruation at the age of 39 years. Attempts of abundant drinking did not improve swallowing in spite of lack of structural stenosis confirmed in endoscopy examination. It was decided to perform subtotal minimally invasive esophagectomy (laparoscopy with right videothoracoscopy-VATS and cervicotomy) (Figs. 1, 2). The

VATS procedure was performed in the prone position. The postoperative period was uneventful with full restoration of swallowing. A histopathologic specimen of the resected esophagus confirmed chronic inflammatory changes in the multiple diverticula walls of the resected esophagus.

Single diverticula of the cervical and epiphrenic part of the esophagus arise by a “pushing mechanism” whereas diverticula at the level of the tracheal bifurcation arise by a “pulling mechanism” [3, 4]. Disorders of esophageal motility, diffuse esophageal spasm and achalasia are the base of arising multiple diverticula or diverticulosis in the thoracic part of the esophagus [5, 6]. There is no relationship between SLE and esophageal motility disorders and diverticulosis reported in the literature; however, it would have been strongly associated in the present case. This theory would be confirmed by absence of stenosis in the endoscopic examination. Exacerbation of clinical symptoms as dysphagia, pain, malnutrition, and food retention depends on the shape and size of the diverticula. The seven diverticula were confirmed in the case, but five of them with a multicentimeter size made food retention much stronger. Minimally invasive esophagectomy (laparoscopy with VATS and cervicotomy) with cervical gastro-esophageal anastomosis allowed the patient to be restored to a good quality



**Fig. 1.** X-ray contrast examination. **A** – Preoperative view. Numerous diverticula in the middle and lower thoracic part of the esophagus are visible. **B** – Postoperative view. Esophagus replaced by gastric graft. Gastro-esophageal anastomosis at the level of his collarbone. **C** – Postoperative view. Lower part of the gastric graft and duodenum located in the vertical position. Pylorus at the hiatal level

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**Fig. 2.** View of operative accesses of the minimally invasive esophagectomy. **A** – Front view. Five laparoscopic accesses and right sided oblique cervicotomy. **B** – Posterior view. Three accesses of the right VATS. Lower anterior access was used to insert a drain tube into the right pleural space

of life. This patient is the second multiple esophageal diverticula case in our material [7]. The first patient was affected by multiple esophageal diverticula of the cervical part of the esophagus and treated by surgery with a good result; therefore, surgery seems to be the treatment of choice in such cases [8–10].

## Disclosure

Authors report no conflict of interest.

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