

Esophageal diverticulum: the unique clinical case

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It is known that esophageal diverticulum is the sacciform protrusion of its wall, which has a connection with the esophagus lumen. Radiographically diverticula is detected in 1.5-2 % of all investigated patients [1, 2, 4]. Bifurcation and pharyngoesophageal diverticula make up the bulk of all the diverticula. The least were described by Zenker and Ziemssen in 1877-1878 and traditionally are called Zenker diverticula. They are usually single and are more common in older men. Zenker's diverticulum sizes – from cherry berry to the child's head. Esophageal diverticula arise in two «weak points» of pharynx and esophagus joint – in Haeckerman (between the lower pharyngeal constrictor and cricopharyngeal muscle; it is here that pharyngoesophageal Zenker diverticula are formed the most often) and Laimer-Killian triangle (between cricopharyngeal muscle and oesophageal muscle) [3].

The leading diagnostic methods of this disease is X-ray and endoscopy.

X-ray is usually detect the sacciform protrusion with clear smooth contours along the posterolateral wall on the boundary of the pharynx and esophagus. The shape and size of diverticula depend on the position the investigation is carried out, the degree of diverticula filling with contrast agent, the presence of content in it and the phase of the study. Large diverticula press on the esophagus, narrowing its lumen, the elasticity of the esophagus walls is preserved. It may also be detected pharynx paresis accompanied by long delay of barium suspension in vallecula and pyriform sinuses. The diverticulum neck is not always clearly detected; diverticulum of large size may overlap the neck with its shadow [4].

Typically, ultrasound (US) of the thyroid gland unaltered esophagus is visualized behind the thyroid left lobe in the form of hollow formation with clearly defined anterior and posterior wall. As a rule, the gas within the body lumen is not detected.

Purpose – to present the case of esophageal diverticulum diagnostics, which was suspected at routine US of the thyroid gland.

Patient R., 56 years, applied for investigation of thyroid with complaints of feeling of pressure, discomfort and sore throat that troubled her for a long time. Previously, the patient repeatedly passed thyroid US without pathology detection.

In the process of investigation we received the following US picture. Thyroid ultrasound (Fig. 1). Thyroid is normally located. Right lobe volume is 6.1 cm³, left lobe volume – 3.7 cm³. The contours are clear, the structure is homogeneous fine-grained. Gland tissue echogenicity is average. Vascularization of the gland tissue is unchanged. Additional formations, including along the neck vascular fascicles, are not defined. Behind the gland left lobe is the large gas concentration in the esophagus lumen. The esophagus wall is not thickened. Next to it the unmodified lymph node 8 x 5 mm is localized. During the investigation the significant expansion of the esophagus lumen containing a large gas bubble drew the attention.

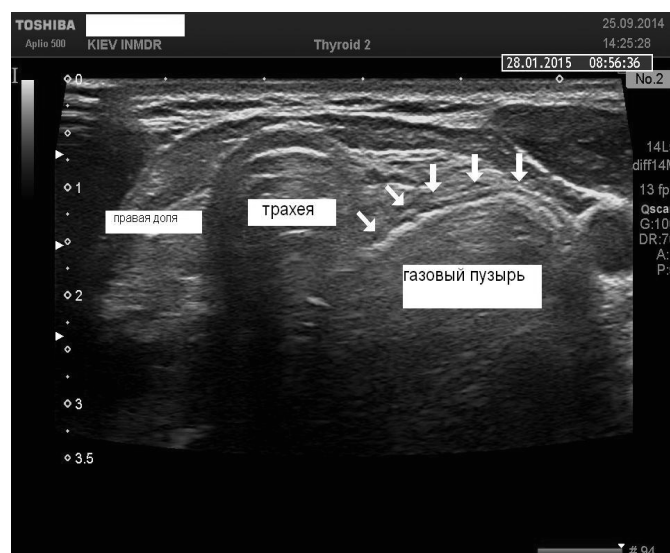


Fig. 1. Thyroid and esophagus echogram (cross-section). Arrows – gas bubble.

Cardia achalasia or esophageal diverticulum was suspected. It was recommended esophagus X-ray examination, which was held at the same day.

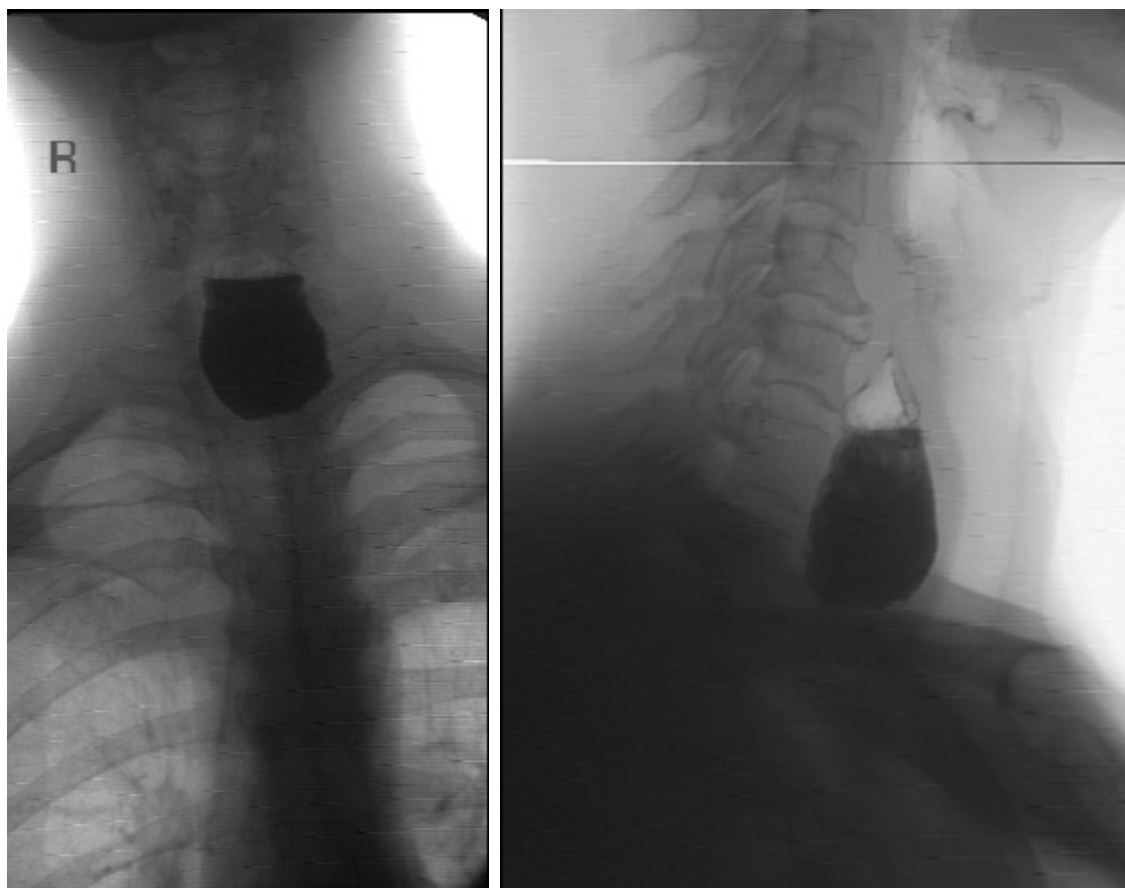


Fig. 2. Frontal and lateral roentgenograms. Zenker's diverticulum with symptoms of diverticulitis.

Esophagus X-ray. The esophagus is freely passed by the contrast agent. Sacciform protrusion of 5.68 x 2, 65 x 3.31 cm (diverticulum) is detected in the pharyngoesophageal transition area along the posterolateral wall with lateralization to the left. Its lower pole is visualized at the level of body caudal plate T1. Diverticulum contrasting is uneven due to food, mucus, air presence (Fig. 2). The rest of the esophagus extent is without apparent pathological changes. Passage of the contents from esophagus into stomach is not broken.

Thus, X-ray investigation confirmed the diagnosis of Zenker diverticulum suspected at routine thyroid US. Visualization of the air bubble in the diverticulum lumen with US was interpreted as the presence of gas in the esophagus cavity. This case proves the rule, according to which, during the examination of the thyroid gland, you should pay attention to the condition of surrounding organs and tissues in order to avoid possible diagnostic errors.

This case proves the rule, according to which, during thyroid gland investigation, the attention should be attracted to the state of the surrounding organs and tissues to avoid diagnostic errors.

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