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Letters to the Editor

Endosonographic diagnosis of aberrant right subclavian artery that leads to disphagia lusoria

Key words: Disphagia lusoria. Aberrant right subclavian artery. Endoscopic ultrasonography.

Dear Editor,

The aberrant right subclavian artery (ARSA) is the most common congenital malformation of the aortic arch (0.4-2% of the general population) (1). ARSA directly arises from the aortic arch, from a remnant of the primitive right aorta called Komerell s diverticulum (2), and 80% of the times runs between esophagus and spine (3). Recurrence respiratory infections and stridor are the most common symptoms in children. When symptomatic in adults, it appears as dysphagia ("disphagia lusoria") (4).

Case report

A 38 years old woman without relevant medical history that was in out-patient study due to dyspeptic symptoms (epigastric discomfort and postprandial swelling) and ocasional dysphagia. The patient underwent high digestive endoscopy and abdominal ultrasound study. First one showed no pathology, but ultrasonographic findings were compatible with pancreatic chronic inflammatory changes. To better characterize these findings, computer tomography (CT) of the abdomen and thorax was performed, showing uncertain pancreatic changes. Owing to these results, her gastroenterologist submitted the patient to our unit in order to confirm chronic pancreatitis by performing an endoscopic ultrasonography (EUS) of the pancreas (most sensitive test for diagnosing incipient chronic pancreatitis). EUS ruled out any pancreatic pathology. During the echoendoscope withdrawal, routine examination of the mediastinum showed an anechoic tubular structure with vascular appearance that, arising from the aortic arch, run from left to the right, behind the esophagus and ahead of the spine. This structure showed arterial flow at the Doppler characterization, and was compatible with ARSA (Fig. 1).

Once EUS was finished and patient had recovered from sedation, we interrogated again about dysphagia symptoms and she told us that the last 15 years she had been having occasional episodes of choking with solid food. Because they were mild, infrequent, and patient s nutritional condition, weight and way of life were not affected, she and her gastroenterologist did not care about them.

Fig. 1. Characteristic EUS findings in patients with aberrant right subclavian artery (ARSA): anechoic structure that arises in the aortic arch and runs from left to the right, behind the esophagus and ahead of the spine.

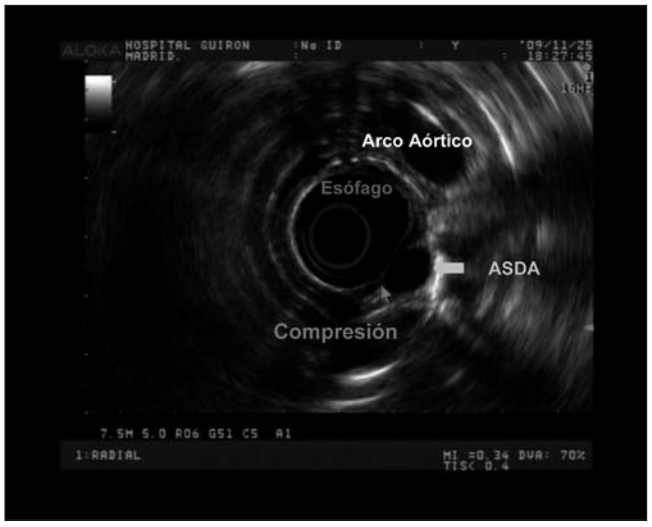

Fig. 2. Esophageal compression due to aberrant right subclavian artery (ARSA). This is the cause of the episodes of dysphagia in patients with this vascular abnormality.

The patient went back to her habitual medical team once informed of EUS findings. They all together judged the new information EUS provided, and finally decided to continue with an expectant behavior because of the absence of repercussion in patient s general status and way of life, and due to the high risk that the surgical reparation of this abnormality represented.

Discussion

ARSA is often a casual diagnosis. Non invasive tests such as computed tomography (CT) and magnetic resonance imaging (MRI) represent the gold standard for the diagnosis of this entity (5), while invasive test such as EUS are uncommonly used.

EUS has became the most accurate test for the evaluation of the esophageal wall and structures around it, with special mention for the study of adjacent vessels due to the incorporation of Doppler technology in the modern echoendoscopes.

Two controlled studies have demonstrated the usefulness of EUS in the diagnosis of ARSA in general population (4,6). EUS was able to diagnose ARSA in 0.36% of the patients from a total of more than 10,000 patients that were referred for EUS. In both studies EUS was more sensitive than non invasive tests performed previously (4,6). Authors considered that the poor sensitivity non invasive tests showed may have been due to the need of high diagnostic suspicion to achieve this diagnose.

Although EUS can characterize this vascular abnormality in an easy and accurate way and without radiation risks, there are not prospective controlled studies comparing EUS and non-invasive tests. Nevertheless, clinical cases like the one above demonstrate the usefulness of EUS for the study of patients with atypical symptoms of dysphagia, when usual tests have not achieved conclusive diagnose. Due to its characteristic findings for ARSA, EUS allows an accurate diagnose of ARSA and enable to inform patient of his pathology and therapeutic options.

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