JBR–BTR, 2012, 95: 134-135.

ANEURYSM OF ABERRANT RIGHT SUBCLAVIAN ARTERY

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Key-word: Arteries, subclavian

Background: A 78-year-old female was referred to our hospital with complaints of chest pain, dyspnea and dysphagia. Her medical history was unremarkable.

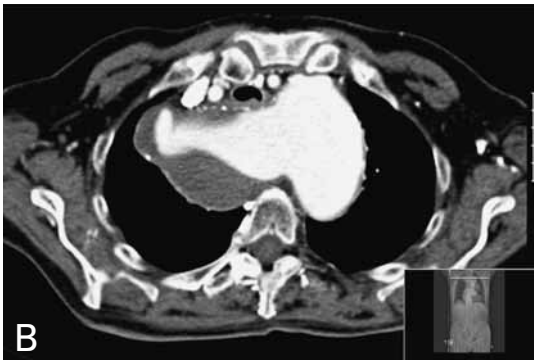

Fig. 1

2A	2B
2C	3

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Work-up

Chest X-ray (PA-view) (Fig. 1) shows tortuous and aneurysmatic aspect of the thoracic aorta with a widened superior mediastinum on the right side. Contrast-enhanced CT scan of the thorax (Fig. 2) demonstrates on transverse section at the level of the aortic arch (A) an aneurysm of the aortic arc is visible as well as an aberrant course of the right subclavian artery posterior to the trachea and esophagus. B demonstrates the broad-based aneurysmatic origin of the aberrant right subclavian artery with mural thrombus. On reformatted image in the coronal plane (C) an aneurysmatic origin of the right subclavian artery with a mural thrombus is shown. On three-dimensional CT-Angiography (3D-CTA) of the thorax (Fig. 3), the posterior view reveals an aneurysmatic dilatation of the origin of the right subclavian artery and an aneurysmatic and tortuous descending aorta.

Radiological diagnosis

The diagnosis of *aneurysm of an aberrant right subclavian artery* was made, also known as a diverticulum of Kommerell.

Discussion

An aberrant right subclavian artery (ARSA) arises most frequently from the left aortic arc. The entity is also known as an arteria lusoria, which is an uncommon finding with a prevalence of 0.5% (range: 0.4-3.0%). In an ARSA cohort of 22 patients, an associated diverticulum of Kommerell was reported in 37% of the cases. Abnormalities of the aortic arc occur early in the embryologic development as a result of incomplete regression of the paired branchial arches. The diverticulum of Kommerell at the base of an ARSA, is believed to be a remnant of the embryonic right aortic arc. The first description of an ARSA was made in 1936 by the radiologist B.F. Kommerell, who observed, during a Barium study of the esophagus, a pulsatile mass compressing the esophagus. Clinical symptoms include dyspnea, dysphagia and weight loss when compression occurs on the trachea and esophagus. However, most patients with ARSA have no related symptoms. Symptoms usually occur when ARSA becomes ectatic and tortuous. In about 80% of the patients the ARSA is located posterior to the esophagus, in 15% between the esophagus and the trachea and in 5% anterior to both.

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