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Case Report

Ortner syndrome secondary to aortic aneurysm

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ABSTRACT

Ortner syndrome refers to vocal cord paralysis resulting from compression of the left recurrent laryngeal nerve by abnormal mediastinal vascular structures. We report a case of Ortner syndrome in a 75-year-old male secondary to aortic arch aneurysm.

Introduction

Ortner syndrome refers to vocal cord paralysis resulting from compression of the left recurrent laryngeal nerve (LRLN) by abnormal mediastinal vascular structures. We report a case of Ortner syndrome secondary to aortic arch aneurysm in a 75-year-old male.

Case presentation

Our case is that of a 75-year-old male who presented for investigation of several years of hoarseness. Contrast-enhanced computed tomography scan of the neck and chest showed paralysis of the left vocal cord (Fig. 1), and a 5.9 × 5.5 × 4.4 cm saccular aneurysm of the aortic arch with a large circumferential mural thrombus, protruding into the aortopulmonary window (Fig. 2). The aneurysm was presumed to be a result of either atheromatous disease or remote trauma to the chest. The patient subsequently underwent endovascular placement of aortic arch stent graft. The follow-up computed tomography angiography demonstrated complete thrombosis and stable size of the aneurysm, and unchanged left vocal cord paralysis.

Discussion

LRLN is a branch of the left vagus nerve, which hooks under the aortic arch lateral to the ligamentum arteriosum, before ascending into the tracheoesophageal groove on its way to innervate left laryngeal intrinsic muscles. LRLN anatomy renders it susceptible to compression by any lesion extending into the aortopulmonary window—a small space between

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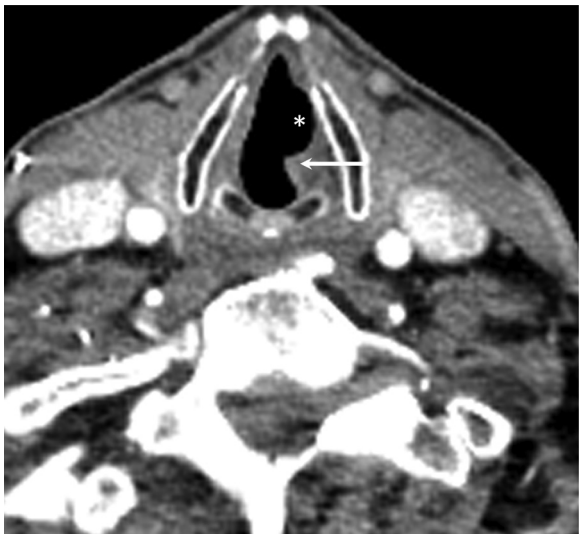

Fig. 1 – Contrast-enhanced axial computed tomography (CT) scan of the neck in end-inspiration with breath hold demonstrates atrophic left vocal cord, which is medialized (arrow), and is associated with glottic airway dilation (*).

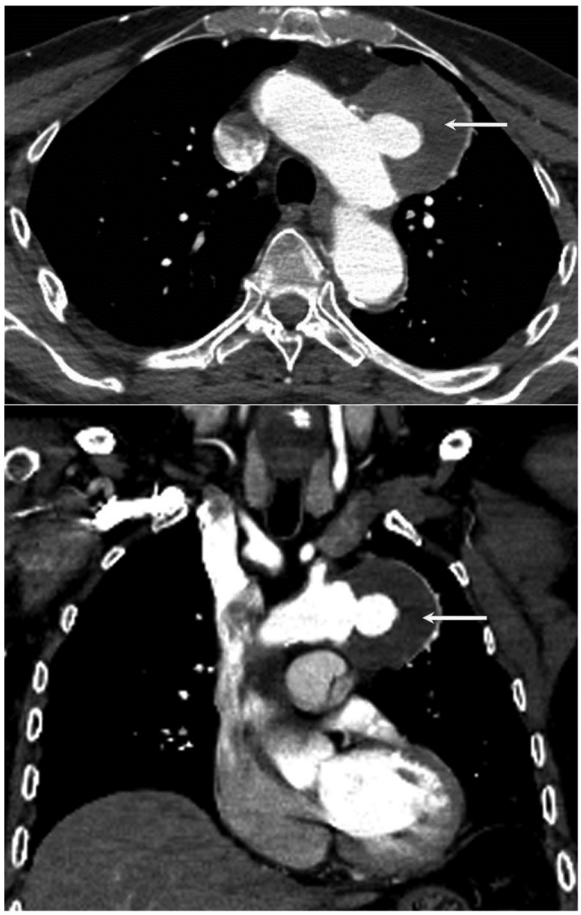

Fig. 2 – Axial and coronal contrast-enhanced CT scan of the chest demonstrates a saccular aneurysm of the aortic arch with a large mural thrombus (arrows), protruding into the aortopulmonary window.

undersurface of the aortic arch and roof of the left pulmonary artery.

Compression of LRLN by abnormal vascular structure resulting in vocal cord paralysis is known as Ortner syndrome, sometimes also called "cardiovocal syndrome". Patients usually present with symptoms of voice change, long-term cough, recurrent aspiration, or dysphasia.

The 3 original cases described by Ortner in the late 19th century, were those of presumed LRLN compression by dilated left atrium in patients with mitral valve stenosis [1]. Subsequently, any vascular cause of LRLN paralysis was referred to by the same name. Most of Ortner syndrome cases are secondary to aortic aneurysms. Additional cases described in the medical literature were secondary to aneurysm of the ductus arteriosus, dilated left atrium, dilated left ventricle, or dilated left pulmonary artery [2–4].

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