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Case Report

Ortner's syndrome secondary to a thoracic thrombosed aortic aneurysm: Case report[☆]

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ABSTRACT

Ortner's syndrome refers to vocal cord paralysis resulting from compression of the left recurrent laryngeal nerve by abnormal mediastinal vascular structures. We present a case of an 89-year-old man who was an active smoker, with a clinical history of hypertension, who presented hoarseness of voice with chronic evolution. Neck and Thoracoabdominal CT angiography was performed revealing a thrombosed aneurysm of the aortic arch.

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Introduction

Ortner's syndrome is a rare etiology of dysphonia, which refers to vocal cord paralysis caused by compression of the left recurrent laryngeal nerve due to abnormalities in the cardiovascular structure in the mediastinum [1].

The causes described in the literature are left atrial enlargement due to various cardiac or valvular abnormalities, pulmonary hypertension, aortic disorder, and ductus arteriosus aneurysm [2].

It counts for approximately 1.5%–6.3% of all the etiologies for unilateral vocal cord palsy [3].

Case presentation

An 89-year-old man with a medical history of hypertension, ischemic cardiopathy, type 2 diabetes mellitus, and 30 pack-year smoking history; presented to the Otolaryngology consultation with hoarseness of voice evolving for 4 months with deterioration in general state of health.

The physical examination found high blood pressure (180/70 mm Hg) and the laryngoscopy revealed a left vocal cord paralysis without objectifying any lesion.

Neck and Thoracoabdominal CT angiography with and without laryngeal phonation was performed because of the

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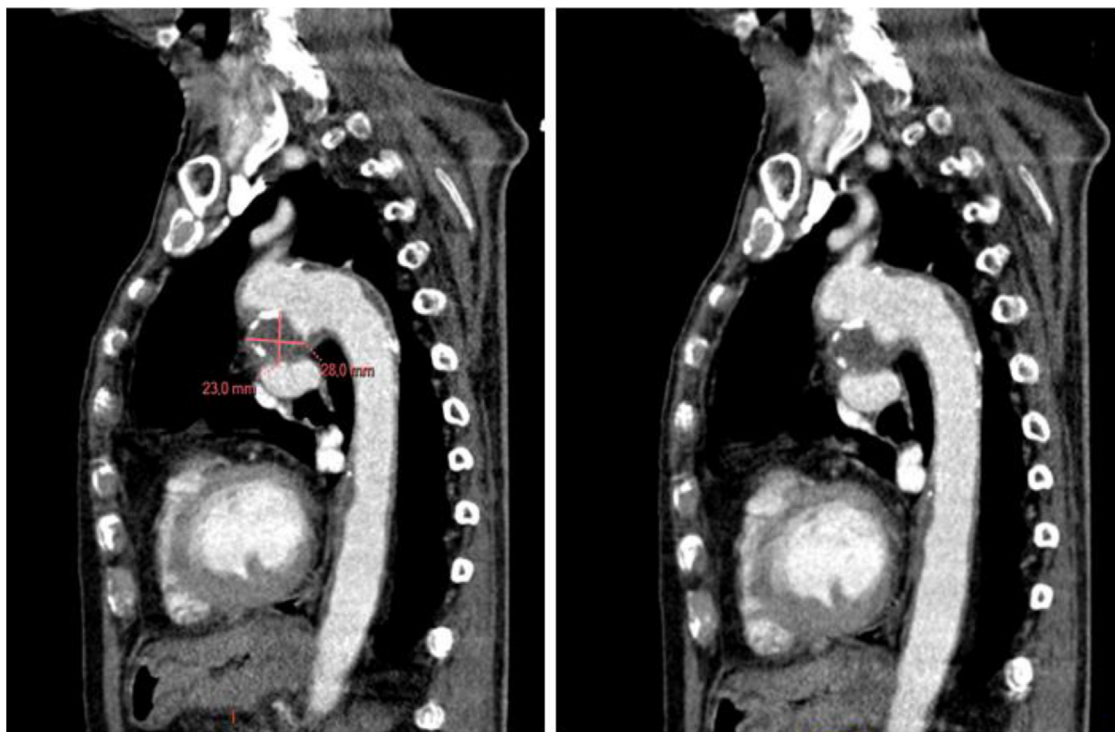


Fig. 1 – Sagittal view showing the thrombosed aneurysmal sac coming into contact with the left branch of the pulmonary artery.



Fig. 2 – Axial view showing the thrombosed aneurysmal sac (white arrow).

normality of the laryngoscopy finding, the cardio-vascular history, and the altered general conditions of the patient.

CT revealed saccular aneurysm of the caudal wall of aortic arch with peripheral thrombosis of most of the aneurysmal sac, and atherosclerotic arteries (Figs. 1 and 2).

The aneurysm was 28×23 mm in volume, in contact with the left pulmonary artery.

Due to the high surgical risk, the patient wasn't able to be considered for a surgical repair of the aneurysm, and still carries his dysphonia.

Discussion

The left recurrent laryngeal nerve arises from the left vagus nerve at the level of the aortic arch curve, and then it curves

around the aorta on the outer side of the ligamentum arteriosum ascending along the tracheoesophageal groove. This prolonged course makes it vulnerable to injury by the lesions of the surrounding structures. The nerve can be compressed by a widening aortic aneurysm sac at the aorta [4,5].

Left recurrent laryngeal nerve (LRLN) palsy is much more frequent than right laryngeal nerve palsy. Most vocal cord paralysis is due to neoplasia, followed by iatrogenic procedures. Aortic aneurysm causing laryngeal nerve palsy is reported to be around 0.3% in some series [6].

Most thrombosed aortic aneurysms are asymptomatic, but some TAA patients may have other symptoms including dysphagia due to compression of the esophagus and breathing difficulties due to incomplete opening of the glottis [7].

Aortic aneurysms from various etiologies account for the bulk of pathology causing Ortner's syndrome [1].

For dysphonia, direct examination via endoscopy remains the criterion standard for evaluation of laryngotracheobronchial pathologic conditions.

In Ortner syndrome, laryngoscopy finds left VC palsy, with normal mucosal and superficial submucosal macroscopic appearance. [8].

CT is mainly used to identify the cause of paralysis, using laryngeal phonation (hee sound) [9].

The most sensitive imaging features that suggest the presence of VC palsy are: abnormal dilatation of the ipsilateral pyriform sinus, medial deviation of the aryepiglottic fold, and ipsilateral laryngeal ventricle dilatation, commonly referred to as the "sail sign [4–11]. When a common cause of hoarseness is not found, beware of hoarseness caused by compression of the LRLN [1].

An X-ray may be ordered to find mediastinal enlargement. Multidetector CT angiography is currently the imaging modality of choice for diagnosis, especially in the arterial scanning phase, which should extend inferiorly to include the pulmonary bifurcation [10–12].

The management of aortic aneurysm disease mainly includes stent-graft repair of thoracic aneurysms and open surgery with aorta replacement [13].

Conclusion

Left recurrent laryngeal nerve is susceptible to compression at the aortopulmonary window by displacement or enlargement adjacent vessels, with the aim of evaluation of vocal cord palsy, it is important to image the entire course of the recurrent laryngeal nerves to identify these rare but important etiologies.

Patient consent

Written informed consent for the publication of this case report was obtained from the patient.

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