

Ortner's Syndrome Secondary to Aortic Aneurysm

Dear Editor,

Ortner's syndrome is a rare disorder characterised by left recurrent laryngeal nerve palsy secondary to a cardiovascular cause. There are several cardiovascular pathologies causing this syndrome, with left atrial enlargement being the most common. Thoracic aortic aneurysm leading to left vocal cord palsy is a relatively rare condition. Computed tomography (CT) plays a crucial role in diagnosis. It may be entirely unsuspected on clinical evaluation.

Case Report

An 80-year-old male presented to the outpatient department with hoarseness of voice for 2 months associated with dry cough and mild breathlessness on exertion. There was no history of hemoptysis, chest pain or weight loss. He was a lifelong smoker. The patient suffered from pulmonary tuberculosis 10 years back. It was adequately treated. On examination, the patient was average built and the general physical and systemic examinations were unremarkable. An indirect laryngoscopy revealed left vocal cord palsy. The left vocal cord showed no mass or ulceration and right vocal cord was normal. A chest radiograph showed a left upper mediastinal mass. Contrast enhanced computed tomography (CECT) revealed a 5.7 cm × 5.5 cm aneurysm arising from the ascending aorta and arch of aorta extending to the aorto-pulmonary (AP) window (Figs. 1A to C).

Discussion

Ortner's syndrome is a rare disorder first reported by Ortner.¹ It is also known as cardiovocal syndrome and refers to left recurrent laryngeal nerve palsy secondary to a cardiovascular disorder.² The enlargements associated with Ortner's syndrome include left atrial enlargement secondary to the valvular heart disease (as originally described), thoracic aortic aneurysm, patent ductus arteriosus or aneurysm of ductus arteriosus, atrial and ventricular septal defect, recurrent pulmonary embolism, Eisenmenger's syndrome and primary pulmonary hypertension.^{3,4} Left atrial enlargement secondary to mitral stenosis is the most common cause with a reported incidence of 1.5% to 6%.⁵ The mechanism of left recurrent laryngeal nerve palsy in these conditions is its traction or compression between the thoracic aorta and pulmonary artery.⁶ This is due to its typical course, which arises from the left vagus nerve and descends into the superior mediastinum between the left common carotid artery and left subclavian artery. The left recurrent laryngeal nerve hooks around the ligamentum arteriosum before ascending into the left tracheo-esophageal groove. Imaging plays an important role in the evaluation of patients with vocal cord palsy, particularly the left as it allows detailed examination of the aortopulmonary window region which escapes adequate evaluation on physical examination. Chest radiograph is the initial imaging modality for evaluation of these patients as it can detect lung or mediastinal lesions



Fig.1. Axial contrast enhanced computed tomography of the chest in mediastinal window shows a 5.7cm × 5.5 cm contrast filled sac in the AP window (Fig. 1A). That on sagittal (Fig. 1B) and coronal (Fig. 1C) reformatted images is clearly seen to be originating from the ascending aorta and arch of aorta and projecting into the AP window, confirming it to be a thoracic aortic aneurysm.

responsible for compression of recurrent laryngeal nerve. However, even in the presence of a normal chest radiograph, a CECT of the neck and chest is required as many small lesions may escape detection by chest radiography. Ortner's syndrome may be suspected clinically but is eventually a radiological diagnosis, accomplished by a contrast enhanced thoracic CT as in our case.

Pankaj Gupta,¹ MBBS, Sanjay Sharma,¹ MD

¹Department of Radiology, All India Institute of Medical Sciences

Address for Correspondence: Dr Sanjay Sharma, Department of Radiology, All India Institute of Medical Sciences, New Delhi, India 110029.
Email: drssharma@hotmail.com

REFERENCES

1. Ortner, NI. Recurrenslahmung bei Mital Stenose. Weiner Klinische Wochenschrift 1897;10:753-5.
2. Chan P, Cheung WK, Ko JT, Yang CY, Chen YC, Hsu JC. Radiological manifestations of cardiovocal syndrome. Zhonghua Yi Xue Za Zhi (Taipei) 1992;50:448-53.
3. Sengupta A, Dubey SP, Chaudhuri D, Sinha AK, Chakravarti P. Ortner's syndrome revisited. J Laryngol Otol 1998;112:377-9.
4. Thirlwall AS. Ortner's syndrome: A centenary review of unilateral recurrent laryngeal nerve palsy secondary to cardiothoracic disease. J Laryngol Otol 1997;111:869-71.
5. Solanki SV, Yajnik VH. Ortner's syndrome. Indian Heart J 1972;24:43-6.
6. Ari R, Harvey WP, Hufnagel CA. Etiology of hoarseness associated with mitral stenosis: improvement following mitral surgery. Am Heart J 1955;50:153-60.