

Case Report

Ortner's syndrome: a radiological diagnosis

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Accepted 11 January 2002

Ortner's Syndrome is a rare clinical entity, first described in 1897.¹ It describes left recurrent laryngeal nerve palsy resulting from identifiable cardiovascular disease. For this reason it is also known as cardiovocal syndrome.² The various underlying conditions includes mitral stenosis, septal defect, mitral valve prolapse and aortic aneurysm.^{3,4,5} We present a case of left vocal cord paralysis secondary to a large thoracic aortic aneurysm.

CASE REPORT An 81-year-old man attended ENT outpatients with a 4-week history of hoarseness. Clinical examination and laryngoscopy revealed paralysis of the left vocal cord, but was otherwise unremarkable. The patient was a non-smoker and had no other related symptomatology. Contrast-enhanced computed tomography (CT) of the neck and thorax was performed on a helical CT scanner (Siemens Somatom Plus S, Siemens, Erlangen, Germany). Data was acquired using a 10mm slice, 14mm feed, pitch 1.4, algorithm. This demonstrated a large aneurysm of the thoracic aorta, measuring 70 x 70 mm, (figure). No other pulmonary or mediastinal abnormality was identified. An urgent

outpatient cardiac surgical opinion was sought, but unfortunately the patient died suddenly a few days later.

DISCUSSION

The left vagus nerve descends into the superior mediastinum between the left common carotid and subclavian arteries before traversing the left side of the aortic arch. At this level it gives rise to the left recurrent laryngeal nerve which hooks around the ligamentum arteriosum before ascending in the groove between the oesophagus and trachea.^{6,7} It continues along this groove to supply all the muscles acting on the left vocal cord, with the exception of cricothyroid.⁸

Several studies have identified left-sided vocal cord paralysis to be commoner than right, including those due to extra-laryngeal causes, such as thoracic aortic aneurysm.^{8,9} The causes of unilateral vocal cord paralysis are numerous, the commonest being neoplasia.^{10,11} Neoplasms account for 32% of cases, closely followed by surgical intervention, 30%, with 16% idiopathic and 11% traumatic.⁸ It has been noted that as many as 5% of thoracic aortic aneurysms manifest clinically as hoarseness secondary to recurrent laryngeal nerve palsy.¹² Underlying cardiac disease represents only a fraction, although this is well documented, even in infancy.^{2,3,12,13,14}

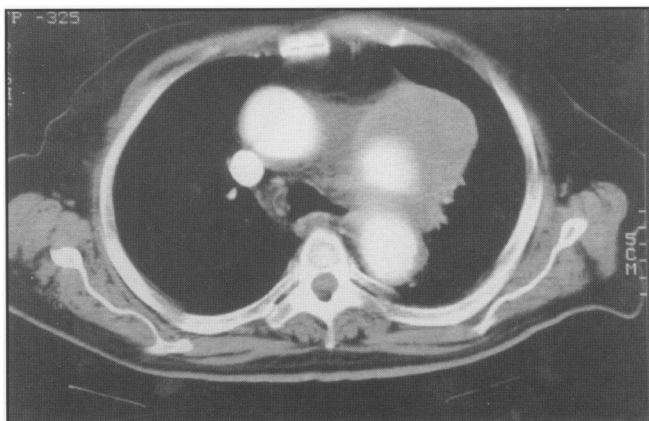


Fig. Contrast enhanced axial CT demonstrating large thoracic aneurysm at the level of the aortopulmonary window.

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This vocal cord paralysis is due to compression or traction on the left recurrent laryngeal nerve between the aortic arch and nearby structures, chiefly the pulmonary artery.^{4, 15}

The role of imaging in the diagnostic algorithm of vocal cord paralysis is crucial. Review of existing plain chest radiographs and referral for plain chest radiograph or computed tomography (CT) imaging should be considered in cases of assumed idiopathic vocal cord paralysis, especially with a cardiovascular history. CT has been shown to be of particular value for identifying abnormalities in the aorto-pulmonary window⁷ as in this case.

In conclusion therefore, we wish to highlight the importance of imaging in patients with idiopathic vocal cord paralysis. In particular we wish to emphasise the role of contiguous contrast-enhanced CT imaging from the base of the skull to the aortic arch.

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