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Case Report

Ortner's syndrome: A rare cause in an elderly smoker

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A 75 years old male patient who was a heavy smoker for over three decades with smoking history of 30 pack years and history of exertional dyspnea and wheeze suggestive of chronic obstructive pulmonary disease (COPD) for 12 years. He also had primary hypertension and type 2 diabetes mellitus for 5 years duration. There was history of progressive hoarseness of voice for 2 months and was admitted for acute exacerbation of COPD. He denied history of hemoptysis, chest pain, anorexia, weight loss dysphagia, swelling of face and eyes. There was no diurnal variation of hoarseness. Clinical examination revealed elderly male who was dyspneic at rest, there was no clubbing or cyanosis. The chest was barrel shaped with bilateral vesicular sounds and bilateral rhonchi. ENT examination showed left vocal cord paralysis. The rest of the systemic examination was unremarkable. The hemogram and biochemical profile were normal. Chest skiagram (Fig. 1) showed superior mediastinal widening with left hilar prominence and bilateral extensive emphysematous changes in lung fields. The contrast CT chest (Fig. 2) showed a partially thrombosed saccular aneurysm of the descending thoracic aorta. The main pulmonary artery was dilated and there was enlargement of right atrium and ventricle. There was no lung mass or mediastinal lymph adenopathy. 2 D echocardiography showed dilated right atrium and right ventricle (Fig. 3) with tricuspid regurgitation and pulmonary arterial hypertension (peak pulmonary artery

Introduction

Hoarseness of voice is a common complaint in the emergency room following benign illness of the upper respiratory tract, most of the time it has a short clinical course and recovers with symptomatic treatment. However hoarseness may follow recurrent laryngeal palsy referred to as Ortner's syndrome (cardio-vocal syndrome) in patients with underlying cardiovascular disorders.^{1–4} In this paper we present a rare case of Ortner's syndrome in an elderly smoker with chronic obstructive pulmonary disease (COPD) and an aneurysm of descending thoracic aorta. The available literature on this subject has been reviewed and discussed.

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Fig. 1 – Chest radiograph showing the widening of superior medias.

systolic pressure 66 mmHg; Fig. 4), left ventricular systolic and diastolic function were normal. He was treated with parenteral broad spectrum antibiotics, nebulized bronchodilators, oral steroids for acute exacerbation of COPD and the dyspnea improved, but the hoarseness persisted. Based on the clinical setting and radiological evidence, a diagnosis of Ortner's syndrome (cardio-vocal syndrome) with left recurrent laryngeal palsy was made. He was started on combination of inhaled long acting beta agonist and steroids (salmeterol + fluticasone). In view of advanced age, severe COPD with cor pulmonale and high risk of complications

Fig. 2 – CT scan showing a partially thrombosed thoracic aortic aneurysm and dilated pulmonary artery.

Fig. 3 – Echocardiogram showing dilatation of right atrium (RA) and right ventricle (RV) with normal sized left atrium (LA) and left ventricle (LV).

during intervention for the aneurysm of aorta the family members opted for conservative treatment.

Discussion

Vocal cord paralysis due to cardiovascular disease leading to hoarseness of voice was first described in 1897 by Ortner, in two cases of mitral stenosis with dilated left atrium causing compression of recurrent laryngeal nerve.³ Subsequently many other causes have been reported in literature including Eisenmenger's complex, atrial septal defect, patent ductus arteriosus, primary pulmonary hypertension, thoracic aortic aneurysm, aortic dissection, and rarely with pulmonary embolism and left ventricular failure secondary to hypertensive heart disease.⁴

In a patient with hoarseness and mediastinal widening on chest radiograph, CT chest offers an excellent screening tool to differentiate between a neoplastic and vascular cause. In patients with aortic aneurysm CT chest delineates the extent of aneurysm and its complications. The mechanism of recurrent laryngeal nerve palsy in the current case may be multifactorial; compression of nerve between the partially thrombosed thoracic aortic aneurysm and dilated pulmonary artery or because of its distortion as it loops round the lateral arch of the aorta.^{4–7} Dynamic dilatation of the pulmonary vessels secondary to sudden pulmonary hypertension; exacerbation of underlying COPD as in the present case has also been described as a cause of hoarseness.⁸ Left recurrent laryngeal nerve palsy is 3 times more common than the right because of its longer circuitous course.⁸ Hoarseness of voice can also be a harbinger of leaking thoracic aortic aneurysm⁹ and in such cases urgent evaluation by contrast enhanced CT chest to establish the diagnosis may be life saving by preventing catastrophic rupture of the aneurysm, the same was not noted in the present case. In most cases with Ortner's

Fig. 4 – Pulmonary artery systolic pressure assessment using continuous wave spectral doppler flow velocity across the tricuspid valve.

syndrome, correction of the underlying cause can lead to reversal of the hoarseness, although many patients have other co-morbid diseases and are unfit for surgical or interventional procedures as was noted in the present case.

To summarize hoarseness of voice of more than 2 weeks may be due to more sinister causes and should be evaluated thoroughly.

Conflicts of interest

All authors have none to declare.

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