

Answer to Medical Quiz - 1

Answers:

- A. Ba-swallow X-ray of oesophagus oblique view reveals posterior displacement of the oesophagus with smooth indentation on the anterior border presumably by the dilated left atrium.
- B. Two-dimensional echocardiography apical 4-chamber view shows hugely dilated left atrium.
- C. Fiberoptic laryngoscopy shows unilateral (left) vocal cord palsy.
- D. Ortner's syndrome due to mitral valvular disease with left recurrent laryngeal nerve palsy.
- E. Mitral valvular disease causes huge dilatation of left atrium, the result of which is dysphagia. The dilated left atrium compresses the left recurrent laryngeal nerve leading to left vocal cord palsy. The vocal cord palsy results in hoarseness of voice, recurrent aspiration, and respiratory tract infection. Hoarseness of voice due to recurrent laryngeal nerve palsy secondary to nerve impingement, stretching, or compression at the mediastinum classically due to mitral stenosis in called Ortner's syndrome or cardiovascular syndrome.

Review:

Ortner syndrome, also called cardiovascular syndrome, refers to left recurrent laryngeal nerve palsy due to cardiovascular disease. Mitral stenosis is a well-recognized cause; however, other conditions like mitral valve prolapse, aortic aneurysm, pericardial effusion and primary pulmonary hypertension may cause Ortner syndrome.¹⁻³

Left recurrent laryngeal nerve palsy causes the hoarseness in Ortner syndrome. The nerve injury is commonly caused by the pressure effect on the nerve by the dilated left atrium or other structures like dilated pulmonary artery, aortic aneurysm, or even pericardial effusion.

Hoarseness of voice, recurrent aspiration pneumonia, dysphagia and features of underlying cause are the common manifestations.

High degree of clinical suspicion is needed for diagnosis. Besides chest X-ray, echocardiography, computed tomographic scanning of chest and fiberoptic laryngoscopy are the first-line investigations.¹

Treatment is mainly directed to the correction of underlying pathology. Early management of underlying condition and advanced treatment of vocal cord palsy might improve hoarseness of voice.

References:

1. Yuan, S. Ortner (cardio-vocal) syndrome: A collective review. *Kuwait Medical Journal* 2014;46(1):3-13.
2. Islam AKMM, Rahman MT, Ali M. Ortner syndrome with recurrent pericardial effusion: a diagnostic and therapeutic dilemma. *J Coll Physicians Surg Pak.* 2013 Sep;23(9):660-2.
3. Islam AKMM, Zaman S and Doza F. Ortner syndrome due to concomitant mitral stenosis and bronchiectasis. *Korean Circ J* 2012;42:507-10. <https://doi.org/10.4070/kcj.2012.42.7.507> PMID:22870088 PMCID:PMC3409403