Single rare central lesion with triple common aerodigestive symptoms

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Case Summary

An elderly gentleman with a known history of well-controlled hypertension presented with a three-week history of hoarseness associated with mild breathlessness. There was no episode of cyanosis, no noisy breathing, and no reduction in effort tolerance. There was also no history of chest pain or orthopnea. He denied any feeling of food stuck in his throat or chest, and he had no history of choking sensations during meals. He, however, was unable to count from 1 to 10 in one breath, and lung auscultation revealed reduced air entry on both sides. A chest radiograph was then obtained.

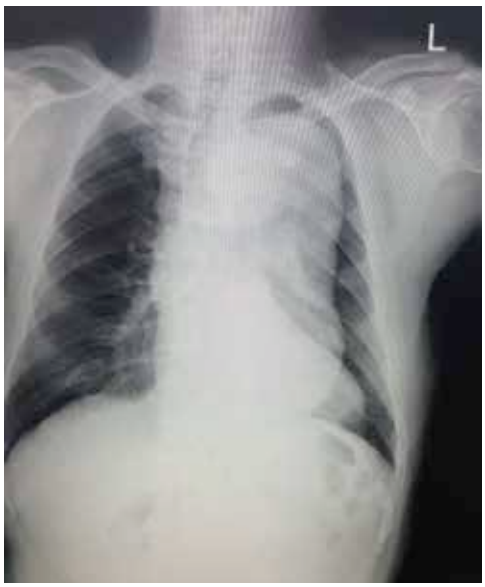

Figure 1: Chest radiograph showing a mediastinal radiopaque mass as the cause of the symptoms.

Questions

1. What is your diagnosis?
2. What is the pathophysiology of the symptoms?
3. What should be done?

Answers

1. The diagnosis is aortic arch aneurysm. Most patients with the condition are asymptomatic, and they are commonly diagnosed with a chest radiograph.[1] The features include widening of the mediastinal silhouette, enlargement of the aortic knob, and displacement of the trachea from the midline.

2. The presence of a huge aneurysm can, by itself, cause restriction of lung expansion, thus reducing expiratory volume. This can lead to breathlessness and hoarseness. Hoarseness also can be caused by recurrent laryngeal nerve compression by the aortic arch aneurysm. This is due to the close anatomical proximity between the aortic arch and the left recurrent laryngeal nerve; hoarseness, alone, can be the sole symptom of an impending aortic aneurysm rupture.[2] The huge aneurysm can also cause dysphagia as the arch of the aorta also crosses the oesophagus. The symptoms of the oesophagus compression by the aortic aneurysm can mimic symptoms of achalasia.

   These three symptoms of hoarseness, breathlessness, and dysphagia are an indication that the size of aneurysm is quite significant. This condition explains the breathlessness; continuous air leakage during phonation results in a short breath span. The patient will not be able to count from 1 to 10, speak in long sentences, or have strong coughs. This is because, for an adequate subglottic pressure that is the prerequisite for speaking, counting or coughing, both of the vocal cords must have a good glottic closure. The presence of a unilateral vocal cord paresis will lead to a glottic gap, thus contributing to continuous air leakage.

3. The patient with suspected vocal

cord paresis should be referred to an otolaryngologist for further laryngoscopic examination. If the lesion is only one-sided and the paralysed cord is in the paramedian position, then the compensatory mechanism is to try to move the opposite cord beyond the midline to achieve a good adduction with the paralysed cord, thus eliminating the symptoms attributed by the glottic gap. If the paresis is bilateral, airway intervention, such as a tracheostomy, may be required. Laser posterior cordectomy may be one of the alternatives to avoid tracheostomy.[3] Cardiothoracic and vascular surgeons should assess his aneurysm status once the airway is stabilized. Subsequent proper investigations would require an evaluation of the entire aorta with computed tomography scan or magnetic resonance angiography.[1]

References

1. Erbel R, Aboyans V, Boileau C et al. 2014 ESC Guidelines on the diagnosis and treatment of aortic diseases. Eur Heart J.2014; 35(41):2873-926.
2. Jaafar R, Mohamad I. Hoarseness as the sole symptom of an impending thoracic aneurysm rupture? Malays Fam Physician. 2014;9(1):25-7.
3. Mohamad I, Jihan WS, Mohamad H, Abdullah B. Laser posterior cordectomy for bilateral abductor vocal cord palsy: a case report. Malays J Med Sci. 2008;15(1):42-3