Vocal cord palsy as a manifestation of cervical osteophyte

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ABSTRACT

Cervical osteophyte is common in the elderly and is a recognised cause of dysphagia for this group of population**.** Depending on the location and volume of the mass of the osteophyte, it can cause direct impingement on the adjacent structures such as the alimentary tract and the airway to cause dyspnoea or foreign body sensation in throat. However, such occurrence is rare and compression of other structures to cause symptoms is even rarer. We report a rare manifestation of an anterolateral cervical osteophyte that caused unilateral vocal cord palsy in an otherwise healthy 56-year-old man.

Keywords: Vocal cord paralysis, cervical spondylosis, degenerative changes

INTRODUCTION

Cervical osteophyte is known to cause pressure effect on the adjacent structures, in particularly the pharynx and oesophagus. The patient usually is elderly and may have a history of chronic dysphagia or foreign body sensation in the throat. [1] Depending on the location and volume of the osteophyte, it can cause symptom which can be mild and treated conservatively, or severe which may necessitate osteotomy. Direct impingement on the alimentary tract and airway can cause dyspnoea or foreign body sensation in throat. However, such occurrence is rare. We report a case of a 56-year-old Malay man who presented with hoarseness, with laryngoscopy showed left vocal cord palsy and computer tomography (CT) scan confirmed the findings of big cervical osteophyte.

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CASE REPORT

A 56-year-old Malay man presented with a week history of hoarseness. He also admitted to having dysphagia to solid over the past two weeks. His past medical history was relevant for diabetes mellitus that was well controlled with oral hypoglycaemic agents. He denied any history of foreign body ingestion, dyspnoea or any other constitutional symptoms. There was no symptom to suggest any antecedent viral illnesses.

Examination revealed a left vocal cord palsy, which was partially compensated by the right cord. The left cord was in lying in the paramedian position, and was positioned

slightly at a lower level than the right (Figure 1). There was no other abnormality seen. A CT scan revealed a large anterolateral cervical osteophyte located posterior to the area between the left thyroid cartilage and the left cricoarytenoid joint at the level of C5/C6. The laryngeal structures were tilted anterolaterally to the right side (Figure 2). The other neck structures and the lungs were clear. A CT brain scan was to rule out any focal lesion was normal.

A diagnosis of left anterolateral cervical osteophyte causing compression to the recurrent laryngeal nerve (RLN) and laryngeal structures were established. A referral to the spine team was made and after a thorough consultation, the patient was managed conservatively. The patient was not keen for any surgical procedure as the symptom was not progressing. He was started on methylcobalamin supplement daily.

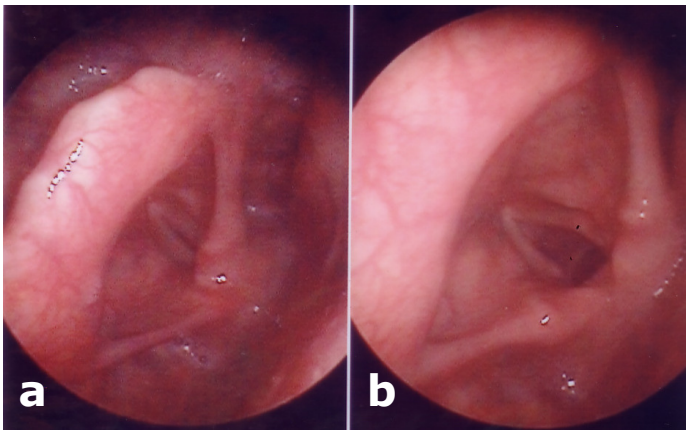
Follow-up reviews showed that his voice and dysphagia were improving. After one and a half year of treatment with methylcobalamin, laryngoscopic assessments showed that the left vocal cord movement was normal and no further phonatory gap.

We postulate that the recovery of the 'transient' left vocal cord palsy may have been due to reduction of inflammation around the osteophyte, that may have been further enhanced by methylcobalamin supplementation.

DISCUSSION

Cervical vertebra anatomical changes can be expected in 75% of elderly over 65 years old. [2] Anterior cervical osteophyte can occur as a result of degenerative process of cervical spine or in diffuse idiopathic cervical hyperostosis (DISH). [3] The commonest symptom at presentation is dysphagia of various degrees depending on location and the size. Foreign body sensation also can be one of its manifestations. Acute dyspnoea which necessitates airway intervention is another rare symptom as the mass typically grows slowly over time. [3]

Unilateral vocal cord palsy is usually iatrogenic from thyroid surgery, trauma or abnormality in the mediastinum, in particular the aortic arch. Bronchogenic carcinoma is also known to cause unilateral vocal cord palsy. The left side is more prone to injury as the course is longer. Compression effect from cervical osteophyte has not been reported.



Figs. 1: a) Laryngoscopic findings during phonation showed a glottic gap while during, and b) normal breathing showed left vocal cord was immobile in paramedian position.

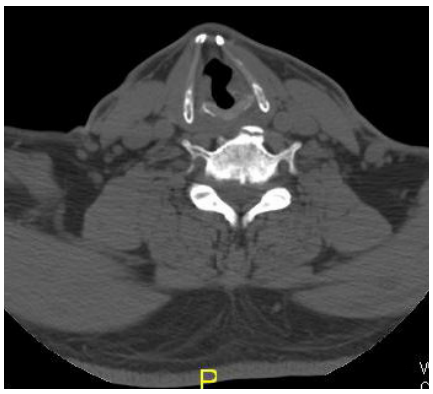


Fig. 2: Axial CT scan showed left anterior cervical osteophyte causing displacement of the larynx to the right.

In our case, the direction of enlargement of the osteophyte was towards the cricothyroid joint, the entry point of the RLN into the larynx to supply the vocal cords. Compression either directly on the nerve or on the surrounding structures resulting in swelling or inflammation in the trachea-oesophageal groove may result in lead vocal cords dysfunction.

In patients with anterior cervical osteophytes, surgical resection is only indicated in selected cases; large bony osteophytes and severe symptoms. [4] Dysphagia is a common indication for surgery and recovery can be expected within one month after resection. [5, 6] Miyamoto *et al*. reported that in patients with cervical DISH and dysphagia, surgical resection resulted in higher risk of osteophyte recurrence. [6] Therefore, it is important to select patients and follow up may need to be more than 10 years.

As our patient did not have the other associated symptoms, he was managed with conservative therapy. Long-term treatment with methylcobalamin may help to hasten nerve injury recovery.

In conclusion, unilateral vocal cord palsy warrants extensive examination and investigations. These include biochemical evaluation for any systemic illness and endoscopic and radiological assessments for local pathology. If local cause is suspected, as in most cases of unilateral nerve palsy, the entire length of RLN including the brain, neck and thorax may need to be imaged. Conservative management may need to be considered if the cause if not known to allow the possibility for spontaneous recovery. Surgery should be reserved to incurable or permanent causes such as bronchogenic carcinoma or palsy which fail to show any improvement after speech therapy.

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