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Case Report

Progressive dysphagia secondary to multiple anterior cervical osteophytes: a case report

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Introduction

The prevalence of anterior cervical osteophytes (ACOs) in the elderly ranges from 20-30% [1]. The majority of ACOs are formed by reactive ossification of the anterior longitudinal ligaments (ALL) secondary to degenerative disease. Anterior cervical osteophytes are largely asymptomatic and can be present in isolation or as a part of diffuse idiopathic skeletal hyperostosis (Forestier disease) [2]. Post traumatic instability and iatrogenic ACO due to spine surgery are among other significant aetiological factors. External compression caused by large anterior osteophytes may result in significant dysphagia. Although such cases have been reported in the literature, this phenomenon is hardly reported in Sri Lanka. We report a 34-year-old man who was found to have large anterior cervical osteophytes while being investigated for progressive dysphagia.

Case presentation

A 34-year-old man on treatment for ankylosing spondylitis presented with progressive dysphagia for 3 months. He also complained of loss of weight and loss of appetite following the development of dysphagia. Even though he complained of neck pain and stiffness, he denied any clinical symptoms of cervical radiculopathy. Investigations for malignancy including an upper gastrointestinal endoscopy were normal. However, lateral cervical spinal X-ray and MRI scan showed multiple large anterior osteophytes in the cervical spine from C4 to C6 [Figure 2(A)]. Barium swallow showed significant oesophageal narrowing at the cervical spinal spur of C3 to C6. He underwent osteophytectomy of C3–C6 cervical spurs through a routine antero-lateral approach [Figure 1 and 2(B)]. His post-operative recovery was uneventful. Dysphagia resolved completely and he was able to revert to his normal diet within 3 weeks of surgery.

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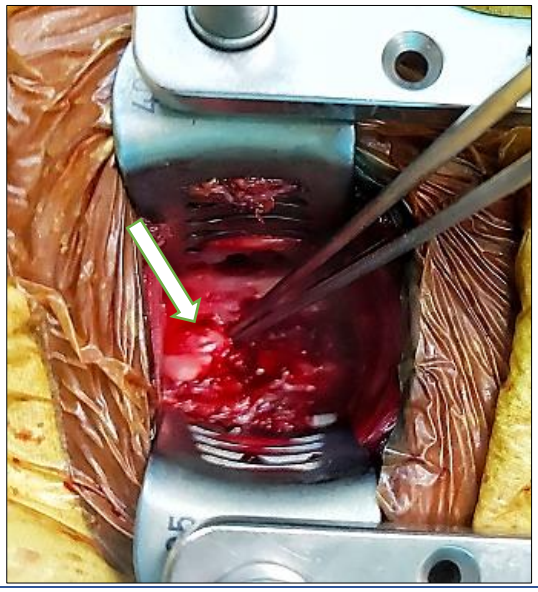

Figure 1: Intra-operative illustration of anterior cervical osteophyte

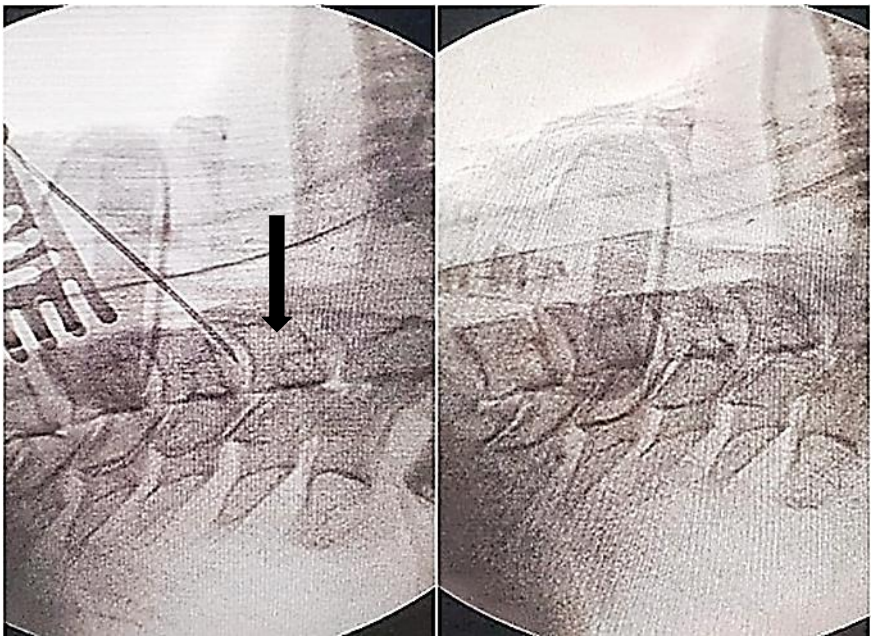

Figure 2: C spine X-ray lateral views (A) Pre-operative showing ACOs (B) post-operative view following osteophyte resection

Discussion

Progressive dysphagia secondary to anterior cervical osteophytes is rare. Therefore, such a diagnosis should be made only after excluding common aetiological factors of dysphagia. All patients should undergo the routine diagnostic workup for dysphagia to exclude intrinsic causes like oesophageal stricture, diverticula, motility disorders and

neoplasms before the diagnosis of ACOs is made. Upper GI endoscopy with the option of taking biopsies and barium swallow, if necessary, should be considered [4].

Dysphagia due to ACOs is more frequently reported in men and severity increases with age [1,2]. ACOs should be suspected in elderly men with a history of any form of arthritis. For example, Kim et al reported that ACOs occur more frequently in men who had varying degree of arthritis with average age of 66 years [1].

Many case reports have identified anterior osteophytes at C3 to C5 level to be associated with dysphagia. Decreased laryngeal elevation and reduced epiglottis inversion causing restriction of epiglottis closure at the level of the laryngeal inlet (C3, C5) may contribute to such a presentation (5). These patients are at high risk of developing aspiration related complications. Although C6-7 osteophytes may cause oesophageal impingement, literature reporting significant dysphagia due to C6-7 ACOs is rare. Apart from direct mechanical compression by the osteophytes, stimulation of inflammation by irritation of the oesophagus and compression of Auerbach's nerve plexus preventing normal motility and inducing local cricopharyngeal or oesophageal spasm may contribute to dysphagia in a patient with ACO [3].

Conservative treatment should be offered to all patients with dysphagia secondary to ACOs. Diet modification along with anti-reflux or anti-inflammatory drugs, muscle relaxants and swallowing therapy has been shown to be beneficial in patients with ACOs with mild symptoms. Patients who do not improve with conservative management are candidates for surgery. Surgical resection of the anterior cervical osteophytes (osteophytectomy) via the standard anterior approach results in significant improvement in dysphagia from immediately after surgey to up to 6 weeks post-operative period [3]. The literature encourages a fusion procedure in addition to osteophytectomy in young patients with significant cervical spine mobility and MRI evidence of spinal cord or root compression secondary to cervical spine arthropathy. However, post-operative haematoma, laryngeal oedema leading to temporary rise in dysphagia and hoarseness of voice that can be attributed to vigorous intraoperative manipulations have been reported after surgery, especially when it is combined with a fusion procedure [4]. In addition, recurrence of the disease after surgery is invariable [4]. Therefore, anterior cervical osteophytectomy and the timing of surgery for the treatment of dysphagia should always be critically analyzed at an individual level to avoid unexpected morbidity.

Summary

Anterior cervical osteophytes are a rare but significant entity causing dysphagia, especially in the elderly population with cervical spine arthropathy. Before the diagnosis of ACOs as the primary cause, patients should undergo thorough evaluation to exclude more common and sinister causes of dysphagia. Surgical resection of ACOs can improve the symptoms dramatically. The patient who fails on conservative management should be offered surgical resection of cervical osteophytes after critically evaluating benefits over risks at an individual level.

Declaration of conflict of interests

The author(s) declare no potential conflicts of interest with respect to the case report, authorship and/or publication of this article.

Consent for publication

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

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