Acta Scientific Gastrointestinal Disorders (ISSN: 2582-1091)

Volume 7 Issue 1 January 2024

Case Report

Anterior Cervical Osteophytosis: An Uncommon Cause of Dysphagia

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Received: October 28, 2023

Published: December 15, 2023

Abstract

Anterior cervical osteophytosis is a non-inflammatory affection characterized by calcification or ossification of the anterolateral paravertebral ligaments in the cervical spine. They are common in elderly patients and may cause dysphagia. They are usually asymptomatic.

Anterior cervical osteophytes represent 1.6% of the etiologies of dysphagia in elderly patients [1].

In this report, a 76-year-old female presented with dysphagia. Cervical CT scan showed anterior and posterior marginal osteophytes, cervical compression at the C4-C5 and C5-C6 levels, C3-C4 antelisthesis and pseudoarthrosis of C7. The oesogastroduodenal transit showed a staged compression of the posterior esophagus. The treatment was symptomatic, based on non-steroidal anti-inflammatory drugs and analgesics. The patient has been lost to follow-up since then.

Although they are rarely involved in the etiology of dysphagia, it is important to investigate in elderly patients. Diagnosis is made by CT scan or VFSS. Treatment is most often conservative with speech therapy for swallowing but surgery is very effective.

Keywords: Anterior Cervical Osteophytosis; Dysphagia; Elderly

Introduction

Anterior cervical osteophytosis is a non-inflammatory affection characterized by calcification or ossification of the anterolateral paravertebral ligaments in the cervical spine. They are common in elderly patients and may cause dysphagia. They are usually asymptomatic.

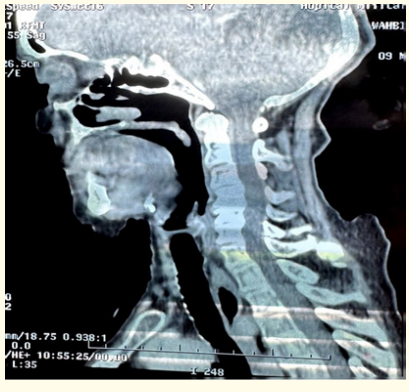
Anterior cervical osteophytes represent 1.6% of the etiologies of dysphagia in elderly patients [1]. This is a rare condition with adequate treatment either conservative or surgical.

We report the case of a patient with dysphagia secondary to anterior cervical osteophytes.

Case Report

A 76-year-old female presented with a three-month history of progressive dysphagia to solides. She was not a smoker or alcoholic and her medical history was unremarkable. She had no cervical pain, weight loss, dysphonia or respiratory complaints. The patient had a normal cervical examination and neurologic exam. Laboratory tests were within normal limits. The upper gastrointestinal endoscopy was normal.

Cervical CT scan showed anterior marginal osteophytes, cervical compression at the C4-C5 and C5-C6 levels, C3-C4 antelisthesis and pseudoarthrosis of C7 (Figure 1).



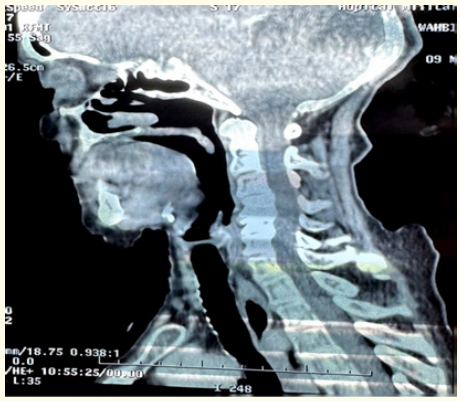


Figure 1: Cervical CT scan showed anterior osteophytes.

The oeso gastroduodenal transit showed a staged compression of the posterior esophagus (Figure 2).

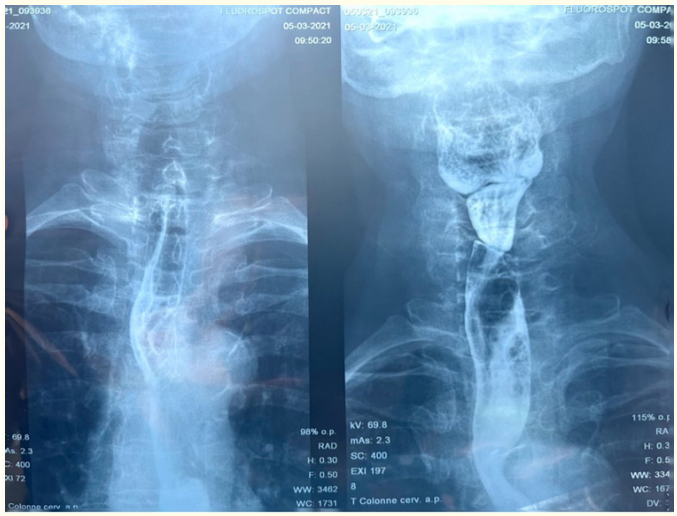


Figure 2: Oeso gastroduodenal transit showed compression of the esophagus.

The treatment was symptomatic, based on non-steroidal anti-inflammatory drugs and analgesics. The patient has been lost to follow-up since then.

Discussion

Anterior cervical osteophytes occur in 20-30% of patients over 60 years [2].

The etiologies include ankylosing spondylitis, degenerative cervical spine disease, and idiopathic diffuse skeletal hyperostosis or Forestier's Disease. Trauma or surgical injury can also induce osteophyte formation.

Older age, male gender, and obesity are risk factors for the development of osteophytes [1]. In a meta-analysis by Verlaan et al, the sex ratio (Male/Female) of osteophyte incidence was 6.1 and mean age 68.9 years [1]. Kim et al report similar results [3]. The prevalence increases with age.

Osteophytes are commonly located between the C3 and C5 vertebras [1] and are usually asymptomatic.

Pathophysiological mechanisms for osteophyte-related symptomatology are many including direct mass effect causing mechanical obstruction, anchoring of the lower esophageal sphincter at the cricoid cartilage, restriction of laryngeal or epiglottis movement, inflammation of the underlying soft tissue leading to fibrosis and stenosis, and inflammatory neuropathy [4].

The most common symptoms are reduced cervical range of movement and non-specific neck pain.

Other symptoms associated with anterior cervical osteophytes are airway obstruction, dysphonia, and stridor [5]. Cough and bronchopulmonary aspiration have also been reported [6].

Dysphagia is rarely described and the incidence varies from 0.1 to 33% in different studies [2]. Osteophytes of C5 and C6 are most involved in dysphagia [7]. Dysphagia due to osteophytes is usually progressive first to solids and later to liquids.

Before defining osteophytes as an etiopathogenic factor in dysphagia, it is important to exclude other causes such as tumor lesions, achalasia, stenosis, stroke, neurodegenerative diseases, and some drugs.

The diagnostic imagery approach involves cervical lateral radiography or CT scan, which offers better performance with improved soft tissue definition, crucial if surgery is indicated [8].

The gold standard for diagnosis of osteophyte-related dysphagia is the video fluoroscopy swallow study (VFSS), showing the degree of swallowing impairment and also the level of osteophytes.

There is no consensus on the management of dysphagia related to anterior cervical osteophytes. Initial treatment should be conservative. This includes speech therapy for swallowing with good results; medications such as muscle relaxants, proton pump inhibitors, and corticosteroids for severe tissue inflammation [4].

The specific surgical treatment for osteophytes is osteophytectomy. There are no clear recommendations of the indication for surgery, but evidence of benefit exists in cases of failure of conservative treatment which is defined as persistent dysphagia with weight loss despite initial measures; or in the presence of significant airway obstruction [9]. Surgical treatment is required for 8 to 10% of patients with dysphagia secondary to osteophytes [8].

In conclusion, anterior cervical osteophytes are common in the elderly population. Although they are rarely involved in the etiology of dysphagia, it is important to investigate in elderly patients. Diagnosis is made by CT scan or VFSS. Treatment is most often conservative with speech therapy for swallowing but surgery is very effective.

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