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Cervical Spondylosis Causing Dysphagia – A Rare Presentation Of A Common Problem

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Abstract

Cervical Spondylosis is a common spine degenerative disease but rarely cause dysphagia as a symptom. Dysphagia caused by this condition can impair quality of life, and the patient may suffer from poor nutritional intake.This is a report of a 57-year-old woman with complaints of dysphagia and neck pain caused by the osteophyte protrusion due to Cervical Spondylosis. This article discusses the patient's presentations, method of diagnosis and treatment options available for the patient.

Keyword: Dysphagia, Spondylosis, Osteophytes

Introduction

Cervical Spondylosis (CS) is a common spinal degenerative disease, and it has been reported as high as 13.76% (1). A study has also shown that cervical spondylosis incidence has increased in the young population, especially among those below 50 years old (2). It has been reported that CS is the main cause of the formation of anterior cervical osteophytes,consistent with its nature as a degenerative spinal disease (3,4).

While the majority of the patient with anterior cervical osteophyte remain asymptomatic, there were some rare cases of symptomatic CS reported in the past. Out of the many rare clinical manifestations of anterior cervical osteophytes, such as dysphonia, dyspnoea, dysphagia, and pain (5), dysphagia is the most prominent symptom (3).We report a rare case of a 57-year-old woman who presented with dysphagia caused by anterior cervical osteophytes impinging the posterior oesophagus.

Case Report

A 57-year-old woman presented to the surgical outpatient clinic with a history of intermittent dysphagia six months before presentation. The dysphagia was mainly after consuming solid food, and the patient described the feeling of 'stuck' after swallowing around the mid-chest area. Moreover, she also gives a

history of posterior neck pain and feeling of stiffness for many years. She never consulted a spine or orthopaedic specialist for her neck pain and stiffness before. The patient has no other significant symptoms and was not reported to have any other medical or surgical illness. No significant abnormalities were found on the patient on physical examination, including her lungs, heart, abdomen, and neurologic. All blood investigations, including Full Blood Count, Renal Profile, Thyroid Function Test and Liver Function Test, were reported as normal. Chest X-Ray showed no evidence of mediastinal lesion and normal features of bilateral lungs. A cervical X-Ray was done given neck pain, and it was reported as C4, C5 and C6 Spondylosis with prominent anterior osteophyte at C4 and C5. An Esophagogastroduodenoscopy (OGDS) procedure was performed on the patient because of the dysphagia **(Figure 1)**, and it was reported that the patient's oesophagus was normal without any mucosal lesion. Given significant dysphagia, a Barium Swallow Fluoroscopy procedure was also performed, and it showed the absence of any oesophagal motility disorder but showed evidence of osteophytes impinging significantly onto the posterior margin of the oesophagus**(Figure 2)**.

She was referred to an orthopaedic surgeon, and after discussing the options of treatment, she opted for conservative management and regular follow up. She has undergone multiple sessions of aggressive physiotherapy for her Cervical Spondylosis which reduces her neck pain and stiffness. During a routine follow up, we found that she has changed her diet by consuming mainly soft and liquid diets while her degree of dysphagia has also decreased.

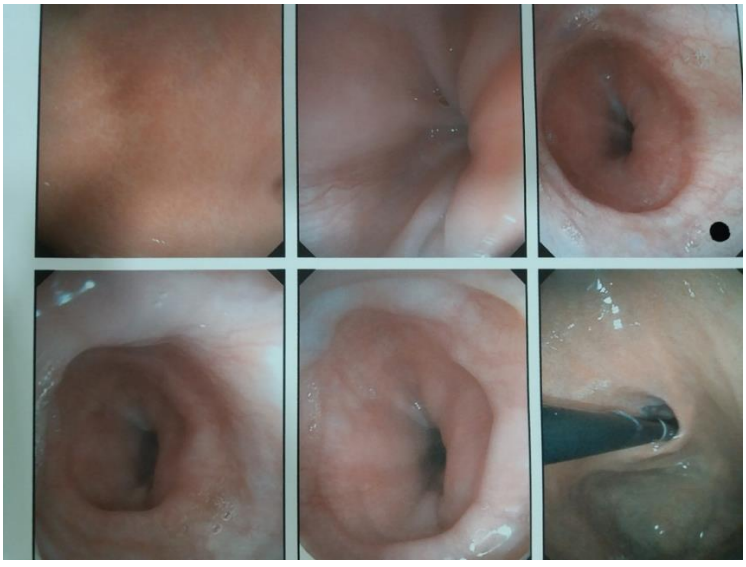

Figure 1: OGDS images showing patient's normal Esophagus

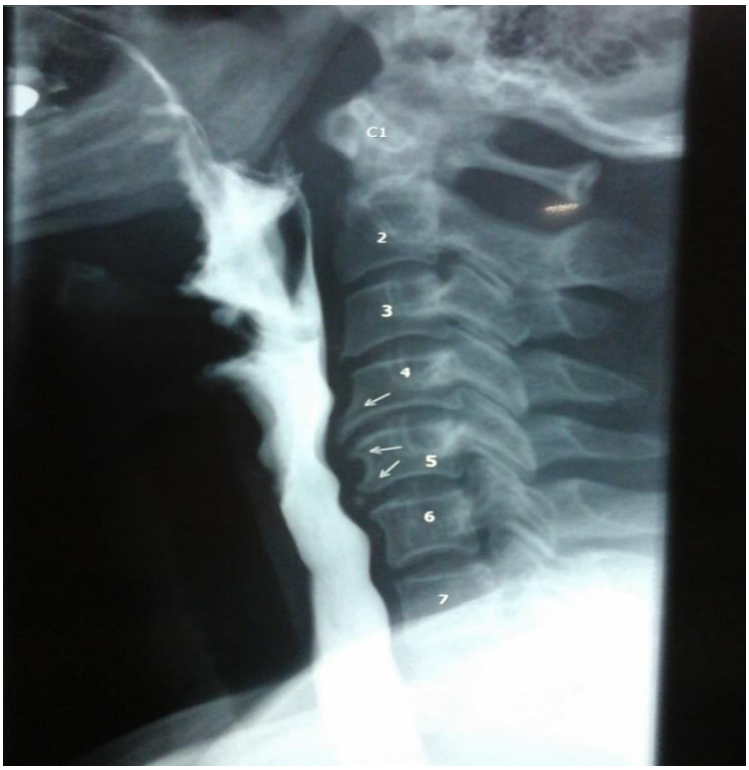

Figure 2: Barium Swallow of the patient; Arrow pointing of anterior cervical osteophyte impinging onto the oesophagus.

Discussion

Dysphagia secondary to Cervical Spondylosis osteophyte is uncommon **(6).**A retrospective study done in the veteran population over 60 years of age undergoing dysphagia evaluation showed anterior cervical bony protrusion was only in 10.6% of patients suggesting that the incidence of cervical osteophytes causing dysphagia is rare **(7).** As dysphagia rarely presents in patients with anterior cervical or thoracic osteophytes indenting the oesophagus. Therefore, cervical Spondylosis causing dysphagia should be considered a diagnosis of exclusion after other pathological lesions such as tumours, rings, webs, achalasia, and stricturesalready excluded **(8).**In our case, the cause of dysphagia for the patient was mechanical compression of the oesophagus by large osteophyte anterior to C5 and C6 vertebral bodies, which was confirmed by the barium swallow X-Ray film.According to a review done by Lee, 2008, of all cases of dysphagia caused by a multilevel cervical osteophyte, 81% of the patients are men with the mean patient age of 68 years old. Typically, C3–6 isthe most common level involved in dysphagia caused by Spondylosis, correspond to the finding in our patient **(9).** However,the manifestation could be considered uncommon in our patient as she is female at 57 years old.

Seidler reported that osteophytes at C3-4 and C4-5 levels were associated with aspiration during swallowing due to restriction of the epiglottic closure, highlightingthat aspiration common in patients

with anterior cervical osteophyte at higher cervical spine levels. In contrast, residue retention with possible post-swallow aspiration is often found in patients with osteophytes in lower cervical spine levels of C5-6 and C6-7 **(10)**.However, our patient did not manifest symptoms of aspiration even though the osteophyte is formed at spinal levels C4 and C5.

While clinical manifestation is crucial in diagnosing patients with dysphagia caused by cervical Spondylosis, there is no significant correlation between the size of the osteophytes and the severity of the dysphagia **(11)**.Diagnostic investigation procedures should be performed by a specialist following the accepted guidelines in managing dysphagia.Procedures such as OGDS, barium swallow, nasal endoscopy, esophagram, and video fluoroscopic studies are useful for visualising potential mechanical obstruction leading to dysphagia **(6,10).**

Diagnostic imaging modalities which can be performed further in a patient with dysphagia, especially among those with neck pain, includes a lateral cervical X-ray and CT scan of the neck to determine any pathological problem of the neck causing dysphagia. The formation of an osteophyte, the degree of compression of the oesophagus and its craniocaudal and anteroposterior extent can be demonstrated by plain lateral radiographs, CT, and barium swallow. A combination of the above-mentioned investigative techniques and OGDS can exclude a neoplasm, a vascular anomaly, and other intrinsic or extrinsic mass lesions and implicating cervical osteophytes as the cause of dysphagia, as in our case **(12,13).**

Dysphagia caused by cervical osteophytes can be managed conservatively or surgically or a combination of both methods according to the evaluation of the treatment progress. The conservative line of treatments consists of swallowing therapy, non-steroidal anti-inflammatory drugs, steroids and muscle relaxant. Diet modification and advice on mastication from speech therapy should be the first line of treatment for dysphagia, and when conservative treatments fail to improve the symptoms, surgical interventions such as osteophytectomyor feeding tube insertion are indicated **(6,14)**.

In most patients, conservative management has shown to be appropriateand sufficient **(15).** Previous prospective randomised trials had shown that one year of physiotherapy treatment on patients with Cervical Spondylosis causing dysphagia produces the same level of satisfaction on both relieve of neck pain and decreasing degree of dysphagia compared to patients who are diagnosed with dysphagiawas treated surgically**(16).**Our patient was treated with an aggressive physiotherapy method and claimed that her neck pain and dysphagia symptoms reduced significantly.

Patients with dysphagia tend to suffer from weight loss as well as malnutrition and dehydration. Therefore, it is critically important for these patients to consume easy to masticate foods and safe to swallow (**18)**. There is evidence that specially made nutritionally enriched texture modified foods (pureed and minced) and thickened fluids (nectar, honey, and pudding consistency) increase dietary intake among elderly persons with chronic dysphagia **(19)**. Therefore, food texture recommended for dysphagia diets should be soft, moist, elastic, smooth, and easy to swallow **(17).** Our patient who opted for conservative management experienced an improvement in her symptom of dysphagia by undergoing aggressive physiotherapy and modification of her diet

Conclusion

Dysphagia caused by Cervical Spondylosis is a rare condition. However, the mechanism is well established, as the osteophyte caused by Spondylosis can cause mechanical obstruction on the posterior part of the oesophagus. Dysphagia caused by Cervical Spondylosis is a diagnosis of exclusion where the common causes of dysphagia need to be investigated through various investigation modalities. Conservative management with diet modification and physiotherapy is sufficient to improve the quality of life in patients suffering from this condition.

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