Osteophyte Arising From The Cricoid Cartilage Causing Dysphagia

Abdussamet Batur, Mehmet Emin Sakarya, Abdulaziz Uslu

ABSTRACT

Although cervical degenerative changes is a common disorder, dysphagia induced by osteophyte formation is uncommon. We present a case of 54-year-old patient suffering dysphagia secondary to cricoidal osteophyte. Physical examination showed no abnormality. A barium esophagography revealed anterior compression of the esophagus at the level of cricoid cartilage. A computed tomography (CT) showed a small spur originating from the cricoid. Magnetic resonance imaging (MRI) demonstrated the osteophyte-induced edema and allowed the differential diagnosis with the other causes of dysphagia. In this report, radiological features of cricoidal osteophyte is presented.

Key words: Dysphagia, cricoid cartilage, osteophyte, paraesophageal edema

INTRODUCTION

There are numerous pathologies causing dysphagia seen in various speciality departments. Some of these lesions are; esophagial inflamatuar diseases, motility disfunc
tions, diverticulum, benign and malignant lesions of the mediastinum, cervical spinal diseases and degenerative diseases of the vertebrae (1,2). Although hypertrophic changes of the cervical spine occur frequently after 5. decades, dysphagia due to the osteophyte compression is very rare (3-7). In this report, a very rarely seen le
sion, which we could find no mention in the literature demonstrating osteophyte arising from the cricoid, as a cause of dysphagia has been described radiologically.

CASE

A 54-year-old male was admitted to our center with a three month history of difficulty in swallowing solid foods. Physical examination and laboratory findings were normal. His medical history was unremarkable. A barium esophagography showed anterior compression of the esophagus at the level of cricoid cartilage (Figure 1). Axial computed tomographic (CT) scan gave vent to spur formation, three mm in diameter, extending from the cricoid cartilage to the posterior (Figure 2). The sagittal reconstruction sections revealed osteophyte extending 13 mm caudally (Figure 3). A magnetic resonance imaging (MRI) was performed to rule out soft tissue...
pathology associated with dysphagia. Paraesophageal inflammatory change adjacent to the osteophyte was observed on MRI (Figure 4).

The patient’s difficulty in swallowing was thought to be secondary to the compression of cricoid osteophyte and osteophyte-induced soft tissue edema.

**DISCUSSION**

Although cervical osteophytes are common in the aging population, dysphagia is rare (4). 3000 cervical spines with degenerative changes were examined and only six of them caused dysphagia (7). Postulated explanations of dysphagia caused by osteophytes include: mechanical
blockage of large osteophytes, compression of small osteophytes to the part of esophagus fixed, or osteophyte-induced paraesophageal inflammatory reaction (1). The esophagus is fixed at two points, at the cricoid cartilage and at the diaphragm and the remainder of the esophagus is fairly mobile from the neck to the abdomen (8-10). Thus, at the cricoid cartilage, a small osteophyte can cause dysphagia (9,10).

Some investigators believe that purely mechanical factors cause dysphagia. Other suggest that dysphagia is also caused by parapharyngitis or paraesophagitis in relation to the protrusion inducing fibrosis and adhesions (7,10). In our situation a small osteophyte arising from the cricoidal cartilage caused dysphagia because of its location and the presence of accompanying edema. Radiological diagnostic approach should include lateral x-ray films, barium esophagography, CT and MRI. The inhesion of osteophyte, its compression on esophagus, the craniocaudal and anteroposterior extention of it, and the adjacent inflammatory changes can be demonstrated by lateral plain radiograph, barium esophagography, CT and MRI, respectively (5). To reveal the cause of our patient’s dysphagia, we used techniques above mentioned and were able to find out the findings of compression due to cricoid spur, accompanied by edema. For the treatment, conservative approach should be applied primarily. Surgery can be performed in the event of progression or to the distinct symptomatic cases (2,8).

As a result, a small osteophyte arising from cricoid cartilage can cause dysphagia by compressing, because esophagus is fixed at this location. The first method to be used in diagnosis should be lateral cervical radiography and barium esophagography. To show areas of osteophytic elongation or to detect of secondary changes to the degeneration CT or MRI can be used, respectively.

Acknowledgments: Material from this report has not been presented anywhere.

Conflict of interest: The authors declare that they have no conflict of interest.

REFERENCES

1. Zırh TA, Öktenoğlu T, Pamir N, Özer AF, Erzen C. Diffuse idiopathic hypertrophic sclerosis causing dysphagia: a case report. Turk Norosurgery 1994;4: 89-93.
2. Pangal S, George J. Cervical Osteoarthropathy: an unusual cause of dysphagia. Age Ageing (1999) 28 (3): 321-2.
3. Nakase H, Shin Y, Park Y, Sakaki T. Dysphagia caused by anterior cervical osteophytes. J Nara Med Assoc 2005;56:43-8.
4. Beahrs OH, Schmidt HW. Dysphagia caused by hypertrophic changes in the cervical spine: report of two cases. Annals of Surgery 1959; 149; 297-9.
5. Giger R, Dulguerov P, Lanker M. Anterior cervical osteophytes causing dysphagia and dyspnea: an uncommon entity revisited. Dysphagia 2006;21:259-63.
6. McCafferty RR, Harrison MJ, Tamas LB, Larkin MV. Ossification of the longitudinal ligament and Forestier’s disease: an analysis of seven cases. J Neurosurg 1995;83:13-17.
7. Bulos S. Dysphagia caused by cervical osteophyte: report of a case. J Bone Joint Surg Br 1974;56:148-52.
8. Çağavi F, Kalaycı M, Uğur MB, Uzun L, Asıl K, Açığöz B. Dysphagia and diffuse idiopathic skeletal hyperostosis: case report. Turk Norosurgery Cilt: 14, Sayı: 2, 146-50, 2004.
9. Ido K, Hashinati M, Sakamoto A, Urushidani H. Surgical treatment for dysphagia caused by cervical hyperostosis: a report of three cases. J Orthopaed Traumatol (2002); 3:55-8.
10. Oga M, Mashima T, Iwakuma T, et al. Dysphagia complications in ankylosing spinal hyperostosis and ossification of the posterior longitudinal ligament. Roentgenographic findings of the developmental process of cervical osteophytes causing dysphagia. Spine 1993;18: 391-4.