



DYSPHAGIA CAUSED BY ANTERIOR CERVICAL HYPEROSTOSIS: CASE REPORT

ANTERIOR SERVİKAL HIPEROSTEOZUN NEDEN OLDUĞU DISFAJİ: OLGU SUNUMU

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ABSTRACT:

The anterior cervical hyperosteophytosis is observed even in 20-30% among healthy people and may be a direct cause of dysphagia. Dysphagia is reported to be the most common symptomatic presentation that refers to a difficulty in the whole or part of swallowing. Diagnosis must be made by laryngoscopic examination because usually the lesion may not be large enough to be seen with oropharyngeal examination. In our case the patient suffer from dysphagia, was treated surgically through removal of the hyperostosis with the transoral approach. Surgical removal of the osteophyte was performed and the patient was relieved from symptoms.

Key words: Dysphagia, Hyperostosis, Cervical osteophyte

Level of Evidence: Case report, Level IV

ÖZET:

Anterior servikal hiperosteofitik oluşumlar sağlıklı insanlar arasında % 20-30 oranında görülebilmekte ve disfajiye neden olabilmektedir. Disfaji, tüm yutma semptomlarındaki en sık semptom olarak belirtilmiştir. Tanısında mutlaka laringoskopik muayene yapılmalıdır çünkü rutin orofarinks muayenesi ile görülemeyebilir. Olgu sunumumuzda disfaji şikayeti olan hasta transoral cerrahi yöntemi ile ameliyat edildi ve hiperosteotik kemik çıkartıldı. Osteofitik parçanın çıkarılmasının ardından hadtanın semptomu kalmadı.

Anahtar kelimeler: Disfaji, Hiperosteoz, Servikal osteofit

Kanıt Düzeyi: Olgu sunumu, Düzey IV

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INTRODUCTION:

Anterior cervical hyperosteotic spurs of the anterior cervical spine may occur in 20% to 30% of the population². Utsinger et al. reported that the symptoms arising from cervical osteophytosis, dysphagia is developed at a ratio of 17%¹⁴. Generally cervical osteophytes are asymptomatic but they may lead to symptoms such as dyspnea, cough, dysphagia and dysphonia^{3,7,10,11}. Mosher et al. first described 2 patients with dysphagia caused by large anterior cervical osteophytes in 1926⁹. The anterior cervical osteophytosis is observed even in 20-30% among healthy people and may be a direct cause of dysphagia¹.

Dysphagia is reported to be the most common symptomatic presentation that refers to a difficulty in the whole or part of swallowing. This disorder occurs in the oral, pharyngeal and esophageal phases which leads to a disorder of function where food in the oral cavity is transferred to the gastrointestinal tract⁶. Diagnosis must be made by laryngoscopic examination because usually the lesion may not be large enough to be seen with oropharyngeal examination⁸.

Large anterior cervical osteophytes are associated with idiopathic skeletal hyperostosis (DISH), posttraumatic osteophytogenesis, senile degenerative skeletal disease, cervical spondylitis, infectious spondylitis and ankylosing spondylitis^{1,4,12,15}. We reported an Idiopathic skeletal anterior cervical hiperosteosis case with the only symptom of dysphagia.



Figure-2. Computed Tomography axial image of lesion



Figure-1. Layngoscopic view of the lesion



Figure-3. Computed Tomography axial image of lesion



Figure-4. Magnetic Resonance Image sagittal view of the lesion

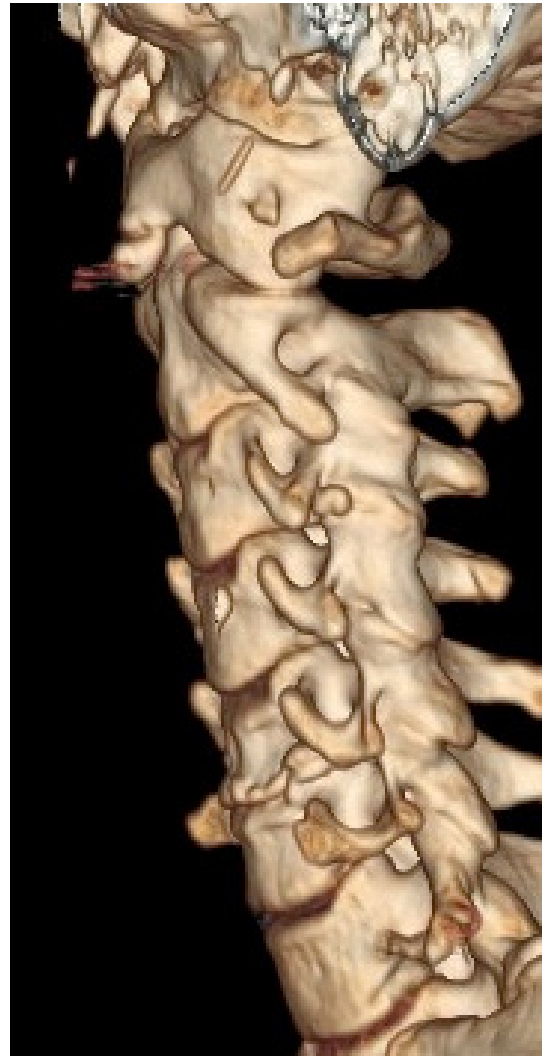


Figure-5. 3D reconstruction by Osirix®

CASE REPORT:

Patient that suffers from dysphagia applied to Ear-Nose-Throat (ENT) department. After a detailed oropharyngeal examination has been made, a swollen lesion was detected at pharynx. Then laryngoscopic examination was made to identify the lesion clearly (Figure-1).

Patient had been consulted to neurosurgery clinic. Computed tomography(CT) and magnetic resonance imaging(MRI) showed lesion in details (Figure-2,3,4). 3D reconstruction of CT was made by Osirix® (Figure-5).

Transoral surgery was recommended to remove the lesion to the patient. Uvula hanged upwards to make the lesion visible on transoral approach. Special Boyle Ecarteur applied to the mouth to reach the lesion. After the incision to the soft tissue the lesion was appeared. High speed drill used to remove the osteophyte. Dysphagia disappeared after the surgery.

DISCUSSION:

Osteophytes of the anterior cervical spine are common in elderly patients and are usually asymptomatic. They may shrink the pharynx or esophagus and can cause dysphagia, dyspnea or stridor. Hyperosteoophytosis of the cervical vertebrae may cause dysphasia with mechanisms such as mechanical pressure on esophagus, inflammation and edema on periphery, cricopharyngeal spasm and abnormal recurvation of epiglottis⁵. It may cause complications, including aspiration pneumonia, bronchospasm, dehydration, malnutrition and suffocation in severe cases⁴.

Diagnostic investigation should include laryngoscopic examination in fact the lesion may not be large enough to be seen with oropharyngeal examination⁸. A lateral plain radiograph can be helpful to evaluate the cervical spine. CT or MRI with sagittal reconstruction is advised to mark the

location of anterior bony lesions in relation to the surrounding tissues. Barium swallow test can also be used to exclude neoplasm as well as reveal compression and obstruction of the esophagus. We used CT and MRI in this case. Alternative causes of dysphagia must be considered including neurologic disease (Parkinson disease, stroke amyotrophic lateral sclerosis) and/or mechanical obstruction due to neoplasms, mediastinal masses, the Zenker diverticulum, esophagus webs and stricture or cancer of the esophagus^{15,17}.

Treatment is conservative or surgical. Conservative treatment is antibiotics, anti-inflammatory agents, steroids and muscle relaxants⁸. There are many surgical techniques, including anterolateral, posterolateral, and transoral approaches^{13,16-17}. In our case the patient was treated surgically through removal of the hyperostosis with the transoral approach. Surgical removal of the osteophyte was performed, and the patient was relieved from symptoms.

The therapeutic approaches considered for dysphagia include medication to reduce inflammation and edema around the cervical vertebrae, and a surgical treatment to restore the movement of epiglottis by correcting the anatomical compression and deformity of cervical vertebrae.

REFERENCES:

1. Albayrak İ, Bağcı S, Sallı A, Kucuksen S, Uğurlu H. A rare cause of dysphagia: compression of the esophagus by an anterior cervical osteophyte due to ankylosing spondylitis. *Korean J Intern Med* 2013; 28: 614-618.
2. Bacigaluppi S, Merciadri P, Secci F, Bragazzi NL, Zona G. An unusual cause of dysphagia: DISHphagia. *British J Neurosurgery* 2015; 29(2): 275-276.
3. Eyigör H, Selçuk ÖT, Osma U, Koca R, Yılmaz MD. Cervical osteophytes: a rare cause of obstructive apnea. *J Craniofac Surg* 2012; 23(5): 444-446.
4. Fox TP, Desai MK, Cavenagh T, Mew E. Diffuse idiopathic skeletal hyperostosis: a rare cause of dysphagia and dysphonia. *BMJ Case Rep* 2013; doi: 10.1136/bcr-2013-008978.
5. Hwang JS, Chough CK, Joo W. Giant anterior cervical osteophyte leading to dysphagia. *Korean J Spine* 2013; 10(3): 200-202.
6. Jeong H, Seo HG, Han TR, Chung CK, Oh BM. Kinematic changes in swallowing after surgical removal of anterior cervical osteophyte causing dysphagia: a case series. *Ann Rehabil Med* 2014; 38(6): 865-870.
7. Kapetanakis S, Vasileiadis I, Papanas N, Goulimari R, Maltezos E. Can a giant cervical osteophyte cause dysphagia and airway obstruction? A case report. *Wien Klin Wochenschr* 2011; 123: 291-293.
8. Lecerf P, Malard O. How to diagnose and treat symptomatic anterior cervical osteophytes? *Eur Ann Otorhinol Head Neck Dis* 2010; 127: 111-116.
9. Mosher HP. Exostosis of the cervical vertebrae as a cause of difficulty in swallowing. *Laryngoscope* 1926; 36: 181-182.
10. Najib J, Goutagny S, Peyre M, Faillot T, Kalamarides M. Forestier's disease presenting with dysphagia and disphonia. *Pan African Med J* 2014; 17: 168.
11. Seo JW, Park JW, Jang JC, Kim JW, Lee YG, Kim YT, Lee SM. Anterior cervical osteophytes causing dysphagia and paradoxical vocal cord motion leading to dyspnea and dysphonia. *Ann Rehabil Med* 2013; 37(5): 717-720.
12. Shih P, Simon PE, Pelzer HJ, Liu JC. Osteophyte formation after multilevel anterior cervical discectomy and fusion causing a delayed presentation of functional dysphagia. *Spine J* 2010; 10: e1-e5.
13. Song AR, Yang HS, Byun E, Kim Y, Park KE, Kim KL. Surgical treatments on patients with anterior cervical hyperostosis-derived dysphagia. *Ann Rehabil Med* 2012; 36(5): 729-734.
14. Utsinger PD. Diffuse idiopathic skeletal hyperostosis. *Clin Rheum Dis* 1985; 11(2): 325-351.
15. Varsak YK, Eryılmaz MA, Arbağ H. Dysphagia and Airway Obstruction Due to Large Cervical Osteophyte in a Patient With Ankylosing Spondylitis. *J Craniofac Surg* 2014; 25: 1402-1403.
16. Von der Hoeh NH, Voelker A, Jarvers JS, Gulow J, Heyde CE. Results after the surgical treatment of anterior cervical hyperostosis causing dysphagia. *Eur Spine J* 2015; 24: 489-493.
17. Zhang C, Ruan D, He Q, Wen T, Yang P. Progressive dysphagia and neck pain due to diffuse idiopathic skeletal hyperostosis of the cervical spine: a case report and literature review. *Clin Interv Aging* 2014; 9: 553-557.