

CASE REPORT / OLGU SUNUMU

GIANT ANTERIOR CERVICAL OSTEOPHYTES: A CASE REPORT

DEV ANTERİÖR SERVİKAL OSTEOFİT: BİR OLGU SUNUMU

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SUMMARY

Diffuse idiopathic skeletal hyperostosis (DISH) is characterized by ossification of the anterior longitudinal ligament of the spine and various extra-spinal ligaments. In this article a 65 year old male with giant osteophytes in the C4-7 levels who complains about dysphagia and aspiration was evaluated with literature review.

Key Words: Diffuse idiopathic skeletal hyperostosis (DISH), deglutition disorders, spinal osteophytosis, asphyxia.

Level of evidence: Case report, Level IV

ÖZET

Yaygın idiopatik iskelet hiperostozu (DISH) spinal anterior longitudinal ligamentin kemikleşmesi ile karakterize bir hastalıktır. Bu yazıda C4-7 seviyelerinde büyük osteofitleri olan, disfaji ve aspirasyon şikayetleri ile başvuran 65 yaşında erkek hastanın tanı ve tedavisi literatür eşliğinde gözden geçirilerek değerlendirildi.

Anahtar Kelimeler: Yutma bozukluğu, spinal osteofit, asfiksi

Kanıt Düzeyi: Olgu sunumu, Düzey IV.

INTRODUCTION

Diffuse idiopathic skeletal hyperostosis (DISH) was described by Forestie and Rotes-Querol in 1950. DISH is characterized by ossification of the anterior longitudinal ligament which extends from atlas to sacrum of the spine (9). The lumbar spine vertebrae are the most frequently affected vertebrae. Cervical spine involvement is uncommon. Dysphagia is seen %1.6 of people with DISH at cervical spine. Etiology of the disease is not clear but previous studies showed that DISH is often seen in elderly population and in patients with type 2 diabetes mellitus (4,9).

In this article, we present a case of DISH with giant osteophytes in the C4-7 levels who complains about dysphagia and aspiration due to narrow esophageal and laryngeal lumens.

CASE REPORT

A-65 year old man, having type 2 diabetes mellitus for 3 years, presented with progressive dysphagia and difficulty in swallowing especially solid foods for 6 months. Once while he was eating an apple he asphyxiated and after hemling maneuver was done he

could take a breath.

The physical examination was unremarkable except decreased range of spinal motion in the cervical region. Indirect rigid laryngoscopes examination showed no vocal cord paralysis or any other pathologies in the base of tongue related with asphyxia and dysphagia.

A lateral cervical spinal X-Ray and cervical magnetic resonance image revealed giant cervical osteophytes at the ventral portion of the C4/5/6/7 vertebral bodies and contagious calcification of the anterolateral cervical vertebra bodies. He was previously evaluated for dysphagia with a barium esophagogram that was discontinued due to aspiration of barium (Figure-1).

Volume rendering reconstruction of the Computed Tomography image showed the thick an irregular spur protruding below the level of hyoid bone (Figure-2).

Surgery was performed under general anesthesia with an anterolateral approach. The paravertebral region exposed with retraction of trachea and esophagus.

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Figure-1. Fluoroscopic image of the barium swallowing study revealed the filling defect of pharynx at level C5 due to compression of extended spur from calcified ALL. There is no other irregularity or narrowing of the barium column.

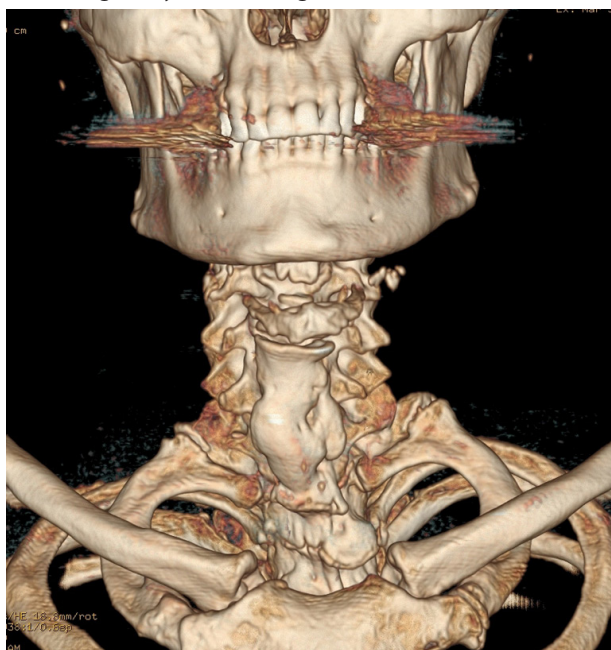


Figure-2. Volume rendering reconstruction of the Computed Tomography image from anterior view shows the thick an irregular spur protruding below the level of hyoid bone. Calcified ALL segment starts from the C5 level and extends to the third thoracic vertebra body. Thyroid cartilage was removed to show the location of the calcification in detail.

gus on the left side and carotid sheath on the right side. Then the paravertebral fascia was separated. The C4-7 level was exposed and identified by lateral scope examination. Osteophytes were removed with Kerrison forceps and diamond drill until the anterior spinal surface from C4 to C7 was flat with palpation and on lateral scope control. Postoperative radiography showed expanded soft tissue density of retropharyngeal area due to resection of the calcified anterior longitudinal ligament (Figure-3).

The patient used the fluids one day after surgery. A non-steroid anti-inflammatory drug (NSAID) treatment twice a day was given for 1 week. The patient was discharged in postoperatively second day without any complication. Written informed consent for this case report was obtained from patient.

DISCUSSION

The ossification pattern of DISH involves the anterior longitudinal ligament, the lateral portion of the annulus fibrosis, and the adjacent vertebral bodies. Disc spaces and facet joints remain unaffected (8). In DISH disease patients are commonly asymptomatic but large anterior cervical osteophytes may lead to progressive dysphagia. The etiology of DISH is unknown. Dietary and mechanical factors like trauma may be correlated with DISH (5).

Lateral cervical radiography is important for diagnosis in patients with DISH. Barium esophagogram may demonstrate narrowing of the esophagus due to the impression of ossification of anterior longitudinal ligament. CT scan and MRI of the cervical spine not only show the position of osteophytes but also show expansion of lesion, additional pathologies like malignancy and the relation of esophagus and trachea lumens with cervical spine (1-2).

The recognition of this disease is important for the explanation of patients' symptomatology. The differential diagnosis of DISH includes ankylosing spondylitis and cervical spondylosis (2). In DISH integrity of the disc spaces and facet joints remain unaffected unlike cervical spondylosis. Although ankylosing spondylitis is a genetic disease with involvement of organs DISH has no genetic link and no organ involvement.

Dysphagia caused by cervical osteophytes may be treated conservatively or surgically (6). Conservative medical treatment includes non-steroid anti-inflammatory drugs, muscular relaxants, steroid therapy and anti reflux drugs in addition to modifying the patient's diet (10). Surgical treatment is recommended if dysphagia is severe and progressive or if the patient does not improve with the medical treatment. The surgical technique is removal of large osteophytes (3).



Figure-3. Postoperative lateral x ray image of the cervical spine shows the degenerative spurs extending from the edges of upper cervical vertebrae, unified C5 and C 6 bodies and expanded soft tissue density of retropharyngeal area due to resection of the calcified anterior longitudinal ligament.

DISH should be suspected in patients with asphyxia and progressive dysphagia. Diagnostic modalities include barium swallowing study and volume rendering reconstruction of the computed tomography images may be helpful in demonstrating the external esophageal and laryngeal compression. Surgical treatment should be evaluated in patients with severe symptoms as asphyxia.

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