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DYSPHAGIA DUE TO DIFFUSEIDIOPATHIC SKELETAL HYPEROSTOSIS (DISH): CASE REPORT
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DYSPHAGIA DUE TO DIFFUSEIDIOPATHIC SKELETAL HYPEROSTOSIS (DISH): CASE REPORT

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SUMMARY

Diffuse idiopathic skeletal hyperostosis (DISH) or Forestier's disease isa form of degenerative arthritiswith unique spinal and extra spinal manifestations. Dysphagia due to DISH is uncommon but when present DISH should be suspected. Surgical decompression can relieve some of the symptoms.
We report a case of a 60 year old male with progressive dysphagia, hoarseness of voice and fixed neck flexion. Imaging studies showed flowing osteophytes of the cervical and thoracic spines. Anterior decompression of the osteophytes at C3/4 was done to relieve the dysphagia with good outcome.

INTRODUCTION

DISH was first described by Forestier and Rotes-Querol, and was then termed senile ankylosing hyperostosis (1). The axial skeleton, particularly the cervical and thoracic spine was involved, but involvement of peripheral joints led to the use the name DISH (2). Characteristic flowing calcifications are detected with images of the spine in plain film X-ray, CT or MRI.

The disease is more common in men (65%); presents in the sixth and seventh decades of life with an incidence of 5–15% (3). It is most common in the thoracic spine and less frequently in the lumbar and cervical spine (3).

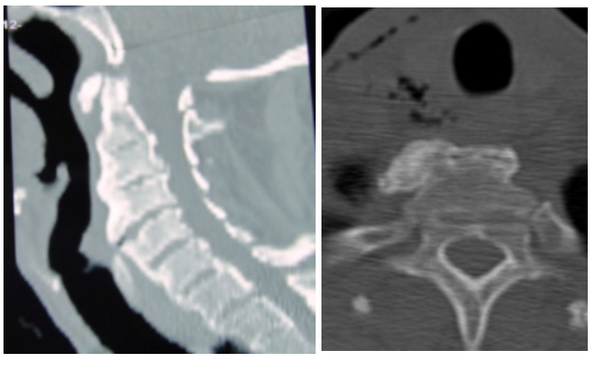
Etiology of DISH is unknown but it is associated with metabolic syndromes such asdiabetes mellitus. Clinically it often asymptomatic but can present with stiffness and sharp pain on flexion. Other presentations may be dysphagia due to direct oesophageal compression, tendinitis and vertebral fracture or subluxation. Myelopathy related to cord compression can also occur due to ossification of the posterior longitudinal ligament (4).

Physiotherapy may help maintain range of motion in affected documents. Non-steroidal anti-inflammatory drugs (NSAIDs)are used to minimise pain, inflammation and calcification.In severe cases of spinal canal stenosis decompressive surgery is undertaken.

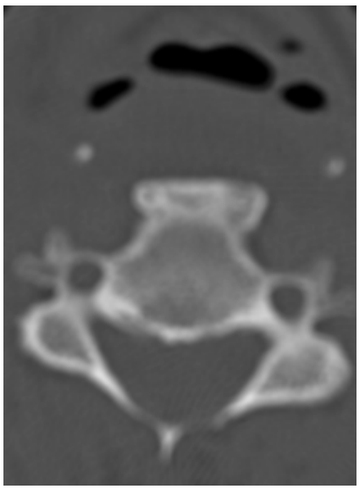
CASE REPORT

A 60 year old male patient presented with dysphagia, hoarseness of voice, fixed flexion of the neck and weakness of distal extremity muscles. The patient was not diabetic. X-Rays showed osteopenia of the cervical spine, Spinal CT and MRI showed multiple extensive osteophytes at C3 and C4 causing oesophageal and laryngeal compression. A standard Smith Robinson anterior approach to the spine was performed through a longitudinal incision to allow a better exposure of the cervical spine.An anterior decompression of osteophytes at C3 / C4 was done to relieve dysphagia. Post operatively he was able to eat by the following day with improved voice pitch and was discharged home within three days on a collar.

Axial CT scan showing exuberant osteophytes of the vertebra



Axial CT scan showing osteophyte with oesophagial compression



Cervical osteophyte before the decompression

DISCUSSION

DISH is anon-inflammatory enthesopathy of unknown etiology. It predominantly affects men resulting in flowing, ossification of the anterior longitudinal ligament of the spine and affects four or more intervertebral levels (1).

Dysphagia secondary to anterior cervical osteophytes have been documented, in isolated case reports (5). However, dysphagia from osteophytic overgrowth from DISH is less common (5).

The radiographic appearance in the peripheral skeleton is frequently distinctive and allows one to make the correct diagnosis, even in the absence of axial radiographs. Conventional radiography clearly confirms the diagnosis, CT and MRI better detect associated findings such as ossification of the posterior longitudinal ligament and its complications like spinal cord compressive myelomalacia (6-10).

The criteria for the diagnosis of DISH involving the spine are (6-10): Flowing ossification along the anterior and anterolateral aspects of at least four contiguous vertebrae,preserved intervertebral disc height, no bony ankylosis of the posterior spinal facet joints, andno erosion, sclerosis or bony ankylosis of the sacroiliac joints.

New diagnostic criteria developed to prevent late diagnosis and complications relies onradiographic aspects of spinal involvement other than the T-spine, clinical manifestations, distribution and features of peripheral joints and entheseal sites involved (6-10).

Recognition of DISH is important to avoid future complications such as dysphagia, unstable spinal fractures, spinal stenosis, postsurgical heterotopic ossifications, difficult intubation, difficult gastroscopy, aspiration pneumonia, myelopathy, and others (6-10).

Some features that distinguish DISH from primary osteoarthritis include predilection to the thoracic spine, the preservation of the intervertebral disc height, a different prevalence and sex distribution, more hypertrophic bony changes of the involved joints,ossification of the ilio-lumbar and sacrotuberous ligaments,with bony overgrowth of the inferior acetabular rim (6). Isolated involvement of the cervical spine has also been described (6).

Non-operative management of dysphagia includes diet modification and medications, are the mainstay of treatment (5).Surgical resection of osteophytes has been suggested as a last resort treatment in cases in which nonoperative modalities have failed (5).

Patients who ultimately elect or require surgical intervention represent the most severe cases, though there are few published series of outcomes (5). Laus *et al.* (5) published a series of six patients with dysphagia secondary to cervical osteophytes. Three most severe cases underwent surgical treatment with rapid resolution of symptoms, which was maintained at one to two year follow-up. Likewise, Goel *et al*. (5) reported three cases managed by surgical resection of cervical spondylotic osteophytes causing dysphagia, also documenting excellent results at short-term follow-up.

Most reports of surgical treatment have used a standard, Smith-Robinson approach to the anterior cervical spine for osteophytectomy as used by the current authors. Using this technique, Humphreys *et al*. (10) reported good short-term results in three patients in two separately published case reports. Likewise, Yee *et al*. (5) and Sobol and Rigual (6) published good long-term outcomes of two cases and one case, respectively, with the same approach. Of note, the transoral/trans pharyngeal approach has also been used, albeit less frequently, to excise anterior cervical osteophytes (5). As the relative indications and level of complexity of these two approaches vary considerably, a comparison between them has thus far not been made.

In conclusion, our study suggests that patients suffering from dysphagia of unknown origin, DISH should be considered and be well investigated for. Decompression of the osteophytes resulted in clinical improvement of the patient

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