Modified Barium Swallow Reveals Diffuse Idiopathic Skeletal University of Kentucky Hyperostosis In A Post-stroke Patient: A Case Report Paul Ilkanich, MD; Jamie Key, DO seeblue. University of Kentucky, Department of Physical Medicine & Rehabilitation, Lexington, KY

Introduction

- Diffuse Idiopathic Skeletal Hyperostosis (DISH) is a disease process in which the ligamentous attachments to the vertebral bodies (entheses) become ossified at 3 consecutive levels¹
- When the ligaments of the intervertebral joints leads to fusion of the vertebrae they are then referred to as syndesmophytes¹
- Dysphagia is commonly present if syndesmophytes involve the cervical region³
- ✤ DISH affects 5% to 10% of patients over the age of 65, commonly in Caucasian males²
- Commonly associated with mellitus, obesity, diabetes hypertension, and coronary artery disease³
- DISH is not associated sacroiliitis, human leukocyte antigen B-27 (HLA-B27) positivity, or any other inflammatory process
- The diagnosis of DISH typically occurs incidentally when plain films are obtained for other reasons¹
- Radiographic imaging generally reveals multilevel excessive anterior osteophyte formation in the cervical spine, and has a predilection for the right side in the thoracic spine¹

Plain Film Radiographs



Case Report

A 70 year old male with a history of hypertension presented to acute inpatient rehabilitation following a left frontal lobe infarct. Per family, patient had been struggling with neck pain for years, and over the week proceeding his stroke he developed significant dysphagia. At our facility, an attempt was made to upgrade his diet from tube feeds via a nasogastric tube, and a modified barium swallow (MBS) was conducted which revealed bony protrusions around the cervical spine. Upon reviewing the MBS, our medical team informed the patient and his family of the findings and they agreed to further imaging of the cervical spine. Plain films revealed a large bridging osteophyte anterior to C4, C5 and C6 concerning for DISH and confirming what we visualized on MBS. An outpatient appointment was made with the orthopaedic surgery team at the University of Kentucky, however the patient did not keep that appointment. He did, however, present to our clinic 8 weeks after discharge with a degree of continued dysphagia, for which he followed with speech therapy outpatient.







view

view

- Image 1. Cervical oblique view details anterior syndesmophyte and displaced anterior structures
- Image 2. Cervical oblique
- Image 3. Cervical anteroposterior (AP) view
- Image 4. Cervical extension

- non-steroidal therapy, bisphosphonates
- myelopathy or lumbar stenosis
- total hip arthroplasty (THA)⁴

To date, there is no known definitive cause for DISH. However, there are several identified possible contributors including exposure to high levels of vitamin A, ingestion of retinoid medications and overproduction of insulin-like growth factor 1. The average rehabilitation patient carries a proportionally higher likelihood of having DISH due to advanced age compared to the general public. As such, rehabilitation physicians should be knowledgeable of the condition, the disease progression, and indications for surgical Additionally, discussion of prognosis with regard to referral. dysphagia after stroke would be altered if there are concomitant medical issues which might delay progress.

- Saunders.
- Set) (2nd ed.). Raven Pr.
- diffuse-idiopathic-skeletal-hyperostosis



Management

If DISH is suspected, plain films (minimum A/P and lateral) should be obtained. If a history of trauma is present in the cervical region consider obtaining CT scan to rule out unstable fracture patterns ✤ Non-operative treatment involves activity modification, physical anti-inflammatory medications and

Operative treatment with decompression and stabilization must be considered if the patient has certain sequelae such as cervical

It is imperative to be cognizant of heterotopic ossification (HO), as HO is significantly more common following orthopaedic procedures in patients with DISH versus without DISH (up to 50% in patients with DISH versus <20% in patients without DISH who underwent

Discussion

References

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