

Diffuse Idiopathic Skeletal Hyperostosis

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Abstract

Case Report

Diffuse idiopathic skeletal hyperostosis (DISH) is a condition characterized by calcification and progressive ossification of ligaments and entheses. Most patients remain asymptomatic until advanced stages of the disease, where limitation and pain are characteristic.

Keywords: DISH, CT, X rays.

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INTRODUCTION

Forestier's disease, also known as DISH, is characterized by excessive bone proliferation at the sites of ligamentous and tendinous insertions, presenting with both spinal and extraspinal manifestations. It is more prevalent among diabetic individuals, obese patients, and those with gout. The incidence rises with age, and the condition is more frequently seen in men. The exact cause remains unknown [1].

The disease is most often asymptomatic and is discovered incidentally during imaging examinations.

Common symptoms include pain, stiffness, and reduced mobility in the affected areas [1, 2].

We report the case of incidental finding of DISH in a 55 years old man.

CASE

A 55-year-old man, victim of a spinal trauma with pain and limited movement, underwent a CT scan of the entire spine, which revealed 'flame-shaped' images which describes the non-marginal syndesmophytes that project horizontally from the vertebrae (figure 1 and 2). The diagnosis of DISH was made.



Figure 1 and 2: Coronal and sagittal plans: Exuberant anterior bony bridges of the thoracic spine creating a continuous or discontinuous cast. Slightly narrowed discs

DISCUSSION

Involvement of the thoracic spine is the most common and characteristic of DISH. It typically manifests on the right side of the thoracic region. Literature supports the initial theory that the pulsatile descending aorta serves as a protective effect and mechanical barrier, preventing DISH formation on the contralateral side. Additionally, recent studies have shown that DISH in the cervical and lumbar regions exhibits distinctly different ossification patterns.

Lateral X-rays and sagittal CT plan reveal anterior hyperostosis development. Forestier's disease preferentially affects the lower thoracic spine from T7 to T11 [1, 5], the right anterolateral surface of the vertebral bodies and discs is bordered by a dense, continuous cast. Initially, the hyperostosis presents as a thin, continuous or discontinuous line that is smooth and regular [1].

In the stable phase, hyperostosis may attain a thickness of 20 mm, enveloping the anterior surfaces of the vertebral bodies and discs. The cast is generally thicker at the disc spaces and may be intermingled with prominent osteophytes. The anterior edges of the vertebrae exhibit exaggerated concavity, distinctly visible at the posterior part of the cast, occasionally separated by a semi-circular linear lucency. The thickness of the discs is typically maintained. Interestingly, frontal views present nonspecific signs, with bony bridges primarily located on the right side of the spine.

When substantial, the hyperostosis creates a distinct barrier on the right anterolateral aspect of the thoracic spine, resulting in a "condensed" appearance of the vertebral bodies when viewed from the front. Cervical and lumbar locations are frequently observed, often in a discontinuous pattern. The discs generally maintain their thickness or are only slightly narrowed, contrasting sharply with the significant bony growths [1].

Peripheral findings often include hyperostosis and tendonitis [3]. Enthesophytes involving the iliac wing and ischial tuberosity may be present in the pelvis [4]. Periarticular hyperostosis and tendinous ossifications have also been reported in the hip, knee,

shoulder, elbow, hand, and wrist [3, 5].

Minor trauma in patients with DISH may result in fracture and instability. These may commonly result in missed injuries that lead to neurologic compromises and delayed treatment. Occult fractures in these patients must be aggressively evaluated using advanced imaging (CT, MRI, or CT myelogram) [6].

Healthcare providers frequently experience confusion when it comes to clinically and radiologically distinguishing between DISH and AS diagnoses.

CONCLUSION

Diffuse idiopathic skeletal hyperostosis is not an inflammatory disease. It is usually diagnosed through X-ray. Treatment aims to manage symptoms such as pain and stiffness.

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