

# An unusually large anterior thoraco-lumbar osteophyte in a case of diffuse idiopathic skeletal hyperostosis

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Sir,

Diffuse idiopathic skeletal hyperostosis (DISH) is an age-related disease that involves degeneration and ossification of soft tissues with predominant involvement of anterior longitudinal ligament and relative sparing of intervertebral discs, facet joints and sacroiliac joints.<sup>[1]</sup> Formation of osteophytes is common in DISH. We report a patient with DISH having an unusually large anterior thoraco-lumbar osteophyte. The case is being reported for striking bird's beak appearance of a huge anterior osteophyte.

A 75-year-old hypertensive male patient presented with the complaints of low back ache, gradually progressive spastic paraparesis for many years and bladder involvement for the past 1 year. Clinically, patient had the weakness of bilateral lower limbs (3/5-Medical Research Council UK). Deep tendon reflexes were exaggerated, and tone was increased in both lower limbs. There was no sensory loss. Patient was on Foley's catheter.

Radiological evaluation revealed significant thecal sac compression at T11-T12 level by hypertrophied and ossified ligamentum flavum. Similar compression was seen at L4-L5 level as well. There was ossification of anterior longitudinal ligament extending across multiple vertebral levels and multiple anterior osteophytes of thoraco-lumbar spine. The osteophyte at T-L junction was very large reaching a size of >4 cm and appearing like a bird's beak. This osteophyte extended anteriorly in the retroperitoneal space

between the aorta on the left side and vena cava on the right side. The intervertebral disc heights were relatively preserved [Figure 1]. Bilateral sacro-iliac joints were normal. The test result for human leukocyte antigen (HLA)-B27 was negative.

Patient underwent T11-T12 and L4-L5 laminectomy under microscope using a high speed drill to avoid inadvertent dural tear and injury to spinal cord. Patient showed significant neurological improvement after surgery. As the gradual osteophyte growth resulted in displacement of aorta and vena cava without causing any symptoms, no intervention for the osteophyte was contemplated.

DISH also known as Forestiers's disease is a disease of elderly with its incidence increasing with increasing age and it affects men more than women.<sup>[2]</sup> The etiological basis of DISH is uncertain; however, association has been found with diabetes mellitus, hyperuricemia and dyslipidemia.<sup>[1]</sup>

Resnick and Niwayama<sup>[3]</sup> in their study have proposed the radiographic criteria for DISH:<sup>[1]</sup> Calcification or ossification of anterolateral aspects of  $\geq 4$  contiguous vertebral levels, i.e. across 3 disc spaces with<sup>[2]</sup> relative preservation of disc height in involved vertebral segments without degenerative disc disease.

Osteophytes are common in DISH. The osteophytes can cause compression of vital structures such as esophagus and produce symptoms like dysphagia<sup>[3,4]</sup> thereby requiring resection. However, they can be asymptomatic as well (like in present case) and may require no treatment.

Ankylosing spondylitis (AS) is another important cause of abnormal ossification of ligaments of spine and exuberant osteophyte formation. Both DISH and AS involve lower thoracic and lumbar spine.<sup>[3,5]</sup> However, ossification in AS is consequent to immune mediated inflammation<sup>[6]</sup> while degenerative changes secondary to

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**Figure 1:** Non contrast computerized tomogram and magnetic resonance imaging of thoraco-lumbar spine showing ossified anterior longitudinal ligament (a), compression of thecal sac at T11-12 & L4-L5 level by hypertrophied/ossified ligamentum flavum (b) and multiple anterior spinal osteophytes of thoraco-lumbar junction and lumbar spine (a & b). Very large osteophyte at thoraco-lumbar spine can be appreciated (a, b). The osteophyte is located between aorta and vena cava (c & d). The intervertebral disc heights are relatively preserved

metabolic abnormalities results in ossification in DISH.<sup>[1]</sup> Occurrence in older age, non-involvement of sacro-iliac joint and absence of HLA-B27 are the features that differentiate DISH from AS.

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