



Case Report

Atypical variant of Baastrup's disease with lumbar stenosis and cauda equina syndrome

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ABSTRACT

Background: Classical Baastrup's disease is a degenerative disorder of the lumbar spine characterized by the approximation of adjacent spinous processes due to excessive lordosis. This results in edema, sclerosis, cyst, bursitis, and midline epidural fibrosis and is often overlooked as a cause of low back pain. Here, we report a patient with atypical Baastrup's disease and lumbar spinal stenosis who presented with a cauda equina syndrome.

Case Description: A 67-year-old male presented with low back pain of 1 year's duration. This exacerbated over the past 3 weeks, becoming associated with the left lower limb numbness/weakness and bladder dysfunction. The lumbar magnetic resonance (MR) showed atypical Baastrup's disease characterized by multiple ill-defined areas of contrast enhancement in the paraspinal region in conjunction with lumbar canal stenosis. The patient underwent lumbar decompression and exhibited improvement in his neurological deficits postoperatively.

Conclusion: This case highlights the atypical MR features of lumbar Baastrup's disease in conjunction with stenosis. Atypical Baastrup's disease should be differentiated from classical Baastrup's disease or other infectious pathologies (e.g., Pott's disease of the spine) and appropriately treated with timely spinal decompression.

Keywords: Atypical Baastrup's disease, Baastrup's disease variant, Cauda equina syndrome, Lumbar canal stenosis, Pott's spine

INTRODUCTION

Baastrup's disease, described as lumbar interspinous bursitis, is a degenerative disorder affecting the lumbar spine, involving mostly the L4-L5 level.^[1] Typically, adjacent spinous processes "kiss" due to excessive lordosis, leading to the degeneration of the interspinous ligaments. Magnetic resonance (MR) findings include edema – hypointense streak on T1 and a hyperintense streak on T2 between the spinous processes, sclerosis – hypointense streak on T2 between the spinous processes, flattening, bursitis, and midline epidural fibrosis.^[3] These findings may lead to symptoms/signs of dorsal lumbar thecal sac compression.^[1] Here, we describe a patient with lumbar stenosis and atypical Baastrup's disease who presented with cauda equina compression.

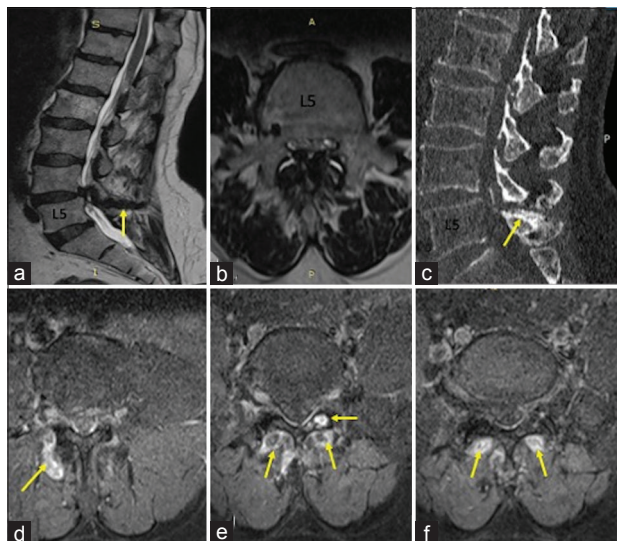


Figure 1: (a) Sagittal T2-weighted magnetic resonance imaging (MRI): L4-L5 interspinous ligament degeneration/sclerosis (e.g., hypointense streak (arrow) and severe canal stenosis. (b) Axial T2-weighted MRI upper L5 level: lumbar canal stenosis with severe thecal sac compression/hypertrophied ligamentum flavum/facet arthrosis. (c) Sagittal noncontrast computed tomography section lumbosacral spine: sclerosis/flattening of spinous processes of L4/L5 (arrow). (d-f) Axial T1 contrast MR: abnormal ill-defined enhancement – “atypical” Baastrup’s disease (arrows).

CASE DESCRIPTION

A 67-year-old male presented with 1 year of low back pain, neurogenic claudication for 6 months, 3 weeks of worsening low back/radiating pain to both lower extremities (L5 distribution), and 1 week of voiding difficulty (residual postvoid 230 ml). On examination, he had weakness involving left hip extension, left foot dorsiflexion (e.g., extensor hallucis longus 3/5), decreased pin appreciation in the left L5-S4 dermatomes, and decreased deep tendon reflexes throughout both lower extremities. Rectal sphincter tone was intact. These findings were consistent with the clinical diagnosis of a cauda equina syndrome.

MR findings

The noncontrast MR imaging of the lumbar spine showed severe lumbar canal stenosis at the L4-L5 level attributed to a prolapsed intervertebral disc and hypertrophied ligamentum flavum (HLF). The contrast MR revealed soft tissue enhancement of the paraspinal musculature, and dorsal to the thecal sac, an inflammatory and/or infectious compressive process [Figure 1].

Surgery

The patient underwent an L4 laminectomy, L4-L5 discectomy, bilateral foraminotomy, excision of HLF, and

biopsy of the paraspinal soft tissues. There was marked L4-L5 thecal sac and nerve root compression. The enhancing dorsal epidural soft tissue (Baastrup’s disease) demonstrated fibrocollagenous changes but no granulomatous, infectious, or neoplastic pathology. Three months later, the patient’s neurological examination normalized.

DISCUSSION

Baastrup’s disease typically occurs in the elderly; 81.3% of patients are above 80 years of age.^[6] It is one of the most underdiagnosed causes of lower back pain and can occur alone or with other degenerative lumbar pathologies.^[2,4] Here, the patient had Baastrup’s disease dorsally in the epidural space at the L4-L5 level in combination with an L4-L5 disc herniation and stenosis resulting in cauda equina compression.^[5]

CONCLUSION

This case highlights the clinical and radiological atypical features of Baastrup’s disease involving the lumbar spine. Although rare, it should be recognized and distinguished from other pathologies such as Pott’s disease of the spine.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms.

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Conflicts of interest

There are no conflicts of interest.

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