

IMAGES IN CLINICAL RADIOLOGY



The “kissing spine” revisited

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A 46-year-old woman presented to our department with persistent low back pain, which increased by back flexion and was released by flexion. On clinical examination, localized midline lumbar tenderness was noted.

MRI showed a soft tissue lesion between the adjacent spinous processes of L3 and L4. The lesion was of low signal intensity on T1-weighted images (WI) (Fig. A, arrow), and hyperintense on the T2-WI (Fig. B, arrow) and fatsuppressed (FS) T2-images (Fig. C). FS T2-WI revealed also bone marrow edema at the opposing faces of the spinous processes (Fig. C, asterisk).

Based on these imaging findings, the diagnosis of Bastrup's disease was made.

The patient was treated with nonsteroidal analgetics.

Comment

Baastrup's disease, also known as “kissing spine”, is characterised by approximation and contact of adjacent spinous processes.

It is part of the spectrum of degenerative changes of the lumbar spine: degeneration of the intervertebral discs and interspinous ligaments allows approximation and contact of adjacent spinous processes. The resulting micro-traumata cause eburnation and flattening of the contact surfaces with the formation of a de novo bursa between the adjacent spinous processes ('Baastrup's bursa'). Rarely, this bursa can become very large, extending anteriorly in the interspinous space and causing compression of the dural sac.

The condition is most frequently encountered in the elderly, with almost 80% of patients older than 80. When found in young patients, the presence of predisposing factors, e.g. hyperlordosis or repetitive hyperextension (gymnasts) should be suspected.

Clinical presentation consists of localised low back pain, typically aggravated by extension. However, it remains unclear whether this pain is caused by bone contact, surrounding inflammation or associated degenerative changes in these (mostly elderly) patients.

The diagnosis of Bastrup's disease can be made based on plain radiography or Computed Tomography (CT) of the lumbar spine. The lateral view shows severe narrowing of the interspinous space with sclerotic transformation and flattening of the contact surfaces.

The advantage of MRI is direct evaluation of associated soft tissue changes (such as Bastrup's bursa) and reactive bone marrow changes at the spinous processes. Particularly, FST2-WI are useful for precise assessment of these changes.

On fluorodeoxyglucose-Positron Emission Tomography (FDG-PET), FDG-uptake between the processes can be seen as a result of the surrounding inflammation.

Conservative treatment with analgetics is usually sufficient. When this therapy fails, interspinous infiltration with corticoids may offer pain-free intervals.

The outcome of surgical removal of the affected spinous processes is variable and therefore, conservative treatment is the preferred treatment option.

Complications are rare. Some authors have reported fractures of the spinous processes following continuous stress or hyperextension injury.

Reference

1. Kwong Y., Rao N., Latief K.: MDCT Findings in Bastrup Disease: Disease or Normal Feature of the Aging Spine. *AJR*, 2011, 196: 1156-1159.

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