Baastrup Disease

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Baastrup disease is a well-documented cause of midline lumbar pain and tenderness.[1] This disease develops when there is close approximation and impingement of one spinous process on another ("kissing spines"). The pain is typically increased with extension and relieved by flexion, localized interspinous injection of anesthetic, or excision of part of the spinous process.[1]

Radiographically, the spinous process impingement leads to reactive sclerosis, enlargement, flattening, and remodeling of the involved vertebral spines (Figure 1). Magnetic resonance imaging (MRI) shows fluid signal intensity between the involved spinous processes—which represents adventitious bursa formation and interspinous bursitis at the site. The bursae are best detected on fluid-sensitive sagittal sequences such as T_2-weighted or short-tau inversion recovery (STIR) sagittal images; the fluid appears as bright or high-signal-intensity areas between the posterior spinous processes (Figure 2). MRI may also show low-signal-intensity sclerosis and change in morphology of the spines—which reflect the findings noted on plain films. Bone scans are often positive in Baastrup disease but may be negative in the absence of spinous process sclerosis and eburnation. Interspinous

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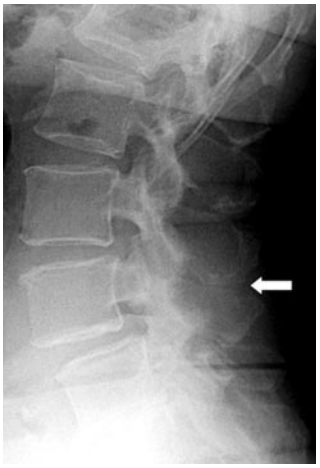

Figure 1. Lateral lumbar x-ray shows disk space narrowing at the lower 3 lumbar levels with grade 1 spondylolisthesis at the L4–L5 level. Note apposition of spinous processes with sclerosis and some flattening of the opposing spines (arrow).

Figure 2. T_2-weighted sagittal image shows high fluid signal intensity between the L3 and L4 spinous processes—which represents interspinous bursitis (arrow).

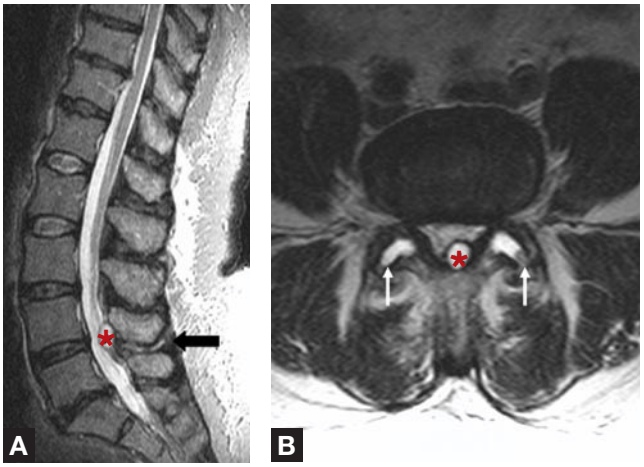

Figure 3. **(A)** T_2-weighted sagittal image shows an interspinous bursa between the L4 and L5 processes (arrow). A posterior epidural cyst (*) encroaching on the thecal sac and central canal appears on this midline sagittal image. **(B)** T_2-weighted axial image shows the posterior epidural cyst (*) narrowing the central canal. Incidental note is made of fluid in the degenerated bilateral posterior facet joints (arrows).

bursitis may precede the changes evident on x-rays, and MRI is a modality sensitive in detecting interspinous bursa formation. Investigators in cadaveric studies have noted increased incidence of interspinous bursae with advancing age, though no bursae were found in cadavers younger than 10 years.[2] Baastrup syndrome was noted clinically in 6.3% of college athletes,[3] most commonly gymnasts, which may be related to the repetitive flexion and extension inherent to the sport.[4]

Chen and colleagues[5] reported on a series of 10 cases of Baastrup disease associated with posterior intraspinal epidural cysts leading to varying degrees of impression on the thecal sac and, in some cases, central canal stenosis (Figure 3). Interspinous bursography showed a connection between the interspinous bursa and the epidural cystic mass in half the patients.

Author's Disclosure Statement

The author reports no actual or potential conflict of interest in relation to this article.

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