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The Spine Journal 16 (2016) e19–e20

THE SPINE JOURNAL

IMAGES OF SPINE CARE

Postoperative multilevel lumbar anterior epidural empyema without spondylodiscitis

An 87-year-old man with persistent low back pain of 3 weeks' duration following a month-old disc surgery at the L4–L5 levels was admitted to our hospital. Spinal magnetic resonance imaging (MRI) revealed anterior epidural lesion between L1 and L5. The lesion was hyperintense on T2-weighted images and hypointense on T1-weighted images comparing muscle intensity (Figs. 1 Left, Right and 2 Left). Postcontrast T1-weighted magnetic resonance images showed peripheral intense enhancement (Figs. 1 Right and 2 Right). Diffusion weighted image showed the lesion to be brightly hyperintense, and the apparent diffusion coefficient map demonstrated restricted diffusion (Fig. 3). Multilevel epidural empyema was diagnosed with these MRI findings. There was T2 hyperintensity in the L4–L5 disc caused by discectomy, but MRI findings of spondylodiscitis were not detected. A small subcutaneous abscess was also seen in the surgical site (Fig. 1 Right).

Spinal epidural empyema is a rare disease and has been reported in elderly patients as a complication of septic infection or spinal surgery [1,2].

References

[1] Pilkington SA, Jackson SA, Gillett GR. Spinal epidural empyema. Br J Neurosurg 2003;17:196–200.

[2] Krishnamohan P, Berger JR. Spinal epidural abscess. Curr Infect Dis Rep 2014;16:436.

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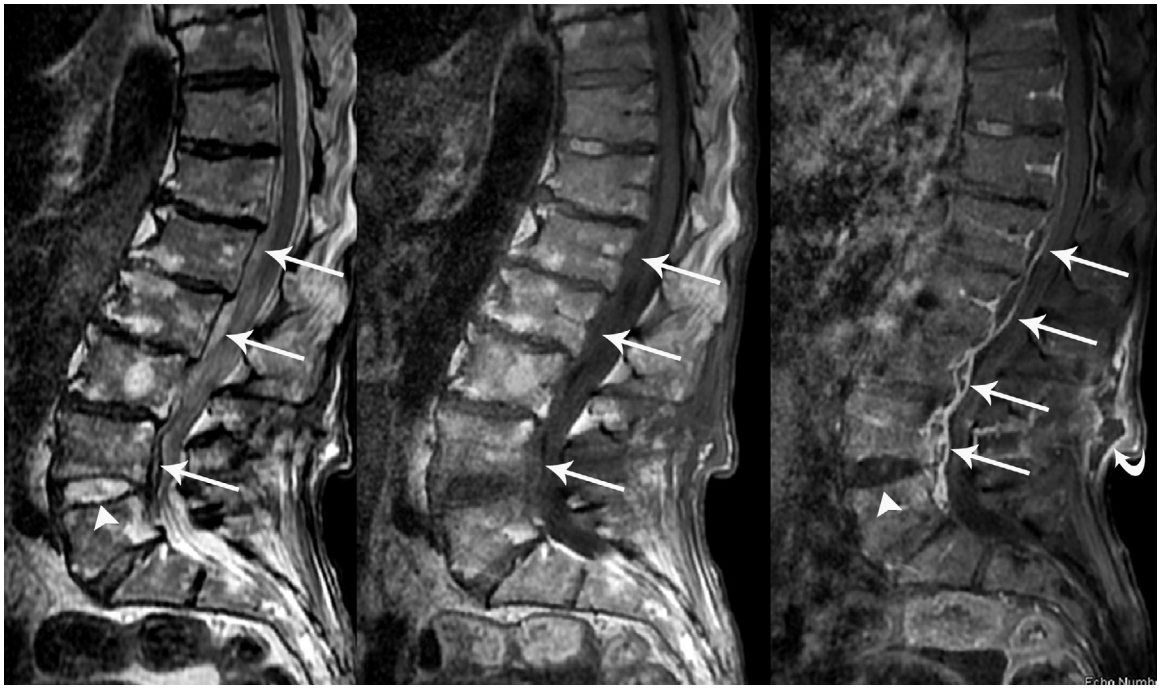

Fig. 1. Lumbar sagittal MRI showed a lesion between the L1 and L5 vertebrae with low signal on T1-weighted image (Left), high signal on T2-weighted image (Middle), and peripheral enhancement on postcontrast image consistent with epidural empyema (arrows). There was T2 hyperintensity in the L4–L5 disc caused by discectomy (arrowhead in Left), but MRI findings of spondylodiscitis were not detected (arrowhead in Right). A small subcutaneous abscess was also found in the surgical site (curved arrow in Right).

http://dx.doi.org/10.1016/j.spinee.2015.09.001

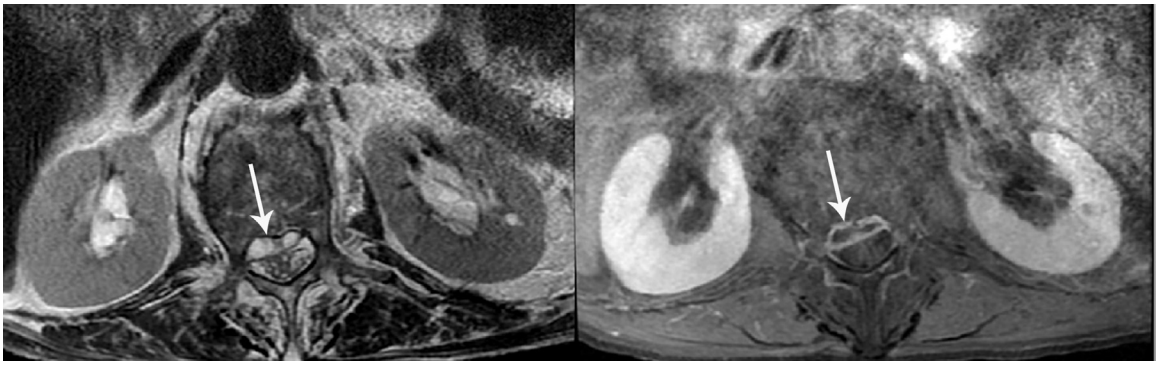

Fig. 2. Lumbar spinal anterior epidural empyema showing high signal on axial T2-weighted MRI (Left) and intense peripheral enhancement on postcontrast T1-weighted MRI (arrows) (Right).

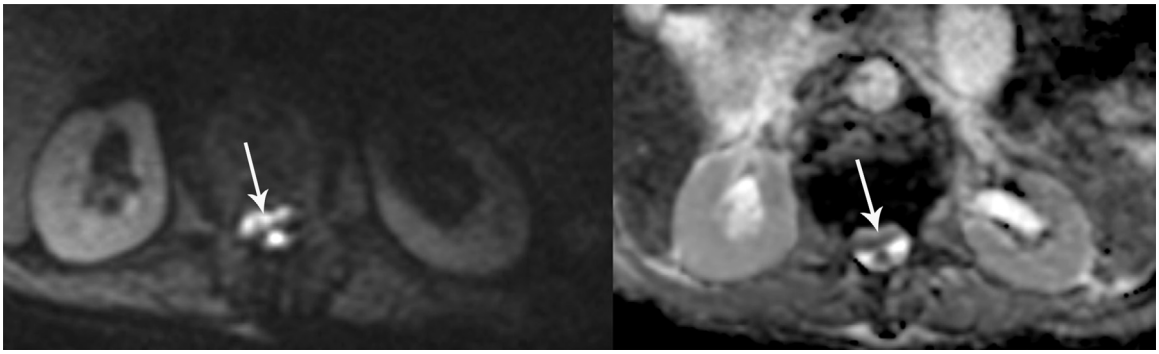

Fig. 3. DWI showed the epidural empyema to be brightly hyperintense (Left), and the ADC map demonstrated that the diffusion abnormality was caused by restricted diffusion as expected (Right).

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FDA device/drug status: Not applicable.

Author disclosures: ***MKD:*** Nothing to disclose. ***BY:*** Nothing to disclose. ***ZOT:*** Nothing to disclose. ***AA:*** Nothing to disclose. ***OK:*** Nothing to disclose. ***DK:*** Nothing to disclose.

The authors declare that they have no conflict of interest.