Spinal epidural gas mimicking lumbar disc herniation

Figure 1 MRI of the lumbar spine

T2 sequences in sagittal (A) and axial orientation (B) illustrate a cranially shifted hypointense mass in the right lateral recess at L3/4 with contact to the nerve root L4 suspicious of a sequestered disc herniation.

A 73-year-old woman presented with acute lower back pain and right sensory radicular L4 syndrome. Spinal MRI showed a cranially shifted T2-hypointense mass suspicious for disc herniation in the L3/4 segment with compression of the right nerve root L4 (figure 1). Due to atypical morphology, CT was performed and disclosed an intraspinal epidural gas bubble mimicking disc herniation on MRI (figure 2). In association with coexisting intravertebral vacuum disc phenomenon (figure 2B), it appears likely that the gas gained access to the epidural space after annulus fibrosus rupture.¹ Vacuum disc phenomenon results from the accumulation of gas (mostly nitrogen) within the crevices of the disc as it degenerates.¹

Figure 2 CT of the lumbar spine

CT reveals an epidural gas bubble mimicking disc herniation on MRI as shown in axial (A) and sagittal (B) cuts (arrows). A coexisting vacuum disc phenomenon (stars in B) indicates the presumed origin of the gas bubble.

Recognizing this condition is crucial for patient management, especially regarding avoidance of neurosurgical procedures.

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1. Kakitsubata Y, Theodorou SJ, Theodorou DJ, et al. Symptomatic epidural gas cyst associated with discal vacuum phenomenon. *Spine* 2009;34:E784–E789.

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