Lumbar Radiculopathy Due to Gas-containing Pseudocyst

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The presence of gas in the intervertebral disc space was described in 1937 by Magnusson¹, and it is commonly referred to as "the vacuum phenomenon." Knutsson suggested in 1942 that this entity is related to disc degeneration², and since then, gas-containing disc herniation has been reported occasionally^{3,4,5}.

A 65-year-old man experienced chronic lumbar pain for many years. He gradually developed pain in the buttock and right leg that radiated to the foot, in the S1 dermatome, after walking for a few minutes. Magnetic resonance imaging (MRI; Figure 1) revealed discarthrosis at the level of L5-S1 and a bubble of gas connected with the disc space, which was severely narrowed. Surgery, an L5-S1 right hemilaminectomy, disclosed a mass with a cystic aspect, covered by a thin membrane of connective tissue and compressing the S1 nerve root. When the thin capsule was opened, gas was expelled and the mass suddenly reduced in size. No disc material was found inside the lesion, but an evident communication with a collapsed intervertebral space was observed. The S1 nerve root regained its mobility after the release of the gas collection. The patient recovered well, and he is completely free of symptoms 6 years after surgery.

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Figure 1. Axial (A) and sagittal (B) T1-weighted magnetic resonance images show the gas-containing lesion at L5-S1.

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