

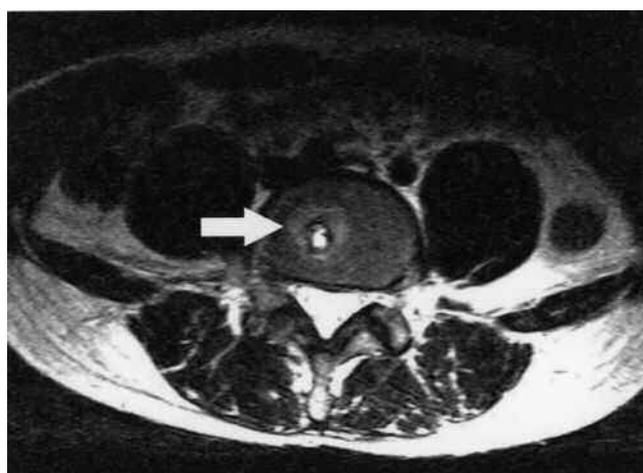
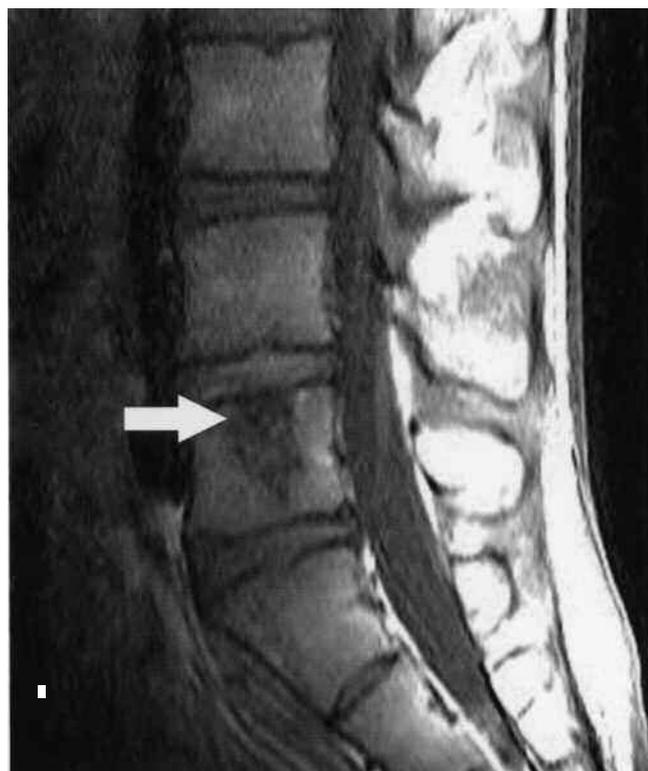
## Cystic Schmorl's Node: An Unusual Cause of Lower Back Pain

WEI-CHOU CHANG, MD; GUO-SHU HUANG, MD; CHUNG-PING LO, MD, Department of Radiology; CHIAN-HER LEE, MD, Department of Orthopedics; YI-CHIH HSU, MD, Department of Radiology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan. Address reprint requests to Dr. G-S. Huang, Department of Radiology, Tri-Service General Hospital, 325 Cheng-Kung Road, Sec. 2, Taipei, 114, Taiwan, Republic of China. E-mail: gsh5@seed.net.tw. *J Rheumatol* 2008;35:2447-8; doi:10.3899/jrheum.080441

A 40-year-old man was admitted to our hospital with symptoms of acute back pain without sciatica. He had a 1-month history of progressive lower back pain and the painful sensation was persistent. He reported no history of trauma or spinal injuries. The neurologic examination and laboratory results were normal. Plain radiographs of the lumbar spine showed a faint osteolytic lesion of the L5 vertebral body, suggesting an inflammatory reaction or benign spinal tumor. Initial magnetic resonance imaging (MRI) revealed an area of low signal intensity in the L5 vertebral body with a small cleft at the superior endplate on the T1-weighted images (Figure 1); T2-weighted images showed a nodule of high signal intensity on the upper portion of the vertebral body, with surrounding bone marrow edema. Followup MRI (Figure 2) was done 3 months later. The previously noted

nodule was enlarged and turned into a purely cystic lesion, which had no enhancement on contrast-enhanced T1-weighted images. The diagnosis of cystic Schmorl's node was made. With the aid of MRI studies, the morphological change of involution in a cystic Schmorl's node was observed. Surgery was performed to relieve symptoms. During the operation, clear yellowish fluid of the cystic lesion was noted and specimens of the lesion were sent for pathology. The pathology results showed disc, bone, and cartilage fragments with few inflammatory cells and amorphous debris, confirming the diagnosis of cystic Schmorl's node. The patient was free of pain on 18-month followup.

A cystic Schmorl's node represents an uncommon end-stage manifestation of Schmorl's node whose pathophysiology is probably related to lipomatous involution of the sec-



B

Figure 1. A. Initial MRI with T1-weighted sagittal image showed an area of low signal intensity in the L5 vertebral body with a small cleft (arrow) at the superior endplate. B. Initial MRI with T2-weighted axial image showed a nodule of high signal intensity (arrow) on the upper portion of the L5 vertebral body, with surrounding bone marrow edema.



**A**



**B**

*Figure 2.* A. Followup MRI with T1-weighted sagittal image showed a homogeneous nodule of low signal intensity. B. Followup MRI with T2-weighted sagittal image showed the nodule was enlarged and turned into a purely cystic lesion.

ondary intramedullar tissular disorders induced by the Schmorl's node itself<sup>1,2</sup>. Knowledge of the unusual involution of Schmorl's node and its characteristic MRI appearances would be helpful for facilitating a correct diagnosis and obviating unnecessary invasive diagnostic or therapeutic procedures.

#### REFERENCES

1. Coulter B. Giant fatty Schmorl's nodes: CT findings in four patients. *Skeletal Radiol* 2005;34:29-34.
2. Hauger O, Cotton A, Chateil JF, Borg O, Moinard M, Diard F. Giant cystic Schmorl's nodes: imaging findings in six patients. *AJR Am J Roentgenol* 2001;176:969-72.