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Spinal extradural arachnoid cyst

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Abstract

BACKGROUND CONTEXT: Spinal extradural arachnoid cysts are uncommon expanding lesions. Idiopathic arachnoid cysts are not associated with trauma or other inflammatory insults. If they enlarge, they usually present with progressive signs and symptoms of neural compression.
PURPOSE: Total removal of the cyst and repair of the dural defect is the primary treatment for large thoracolumbar spinal extradural arachnoid cysts causing neurogenic claudication. Laminoplasty may prevent spinal deformities in long segmental involvement.
STUDY DESIGN: A clinical case was performed.
PATIENT SAMPLE: We report a case of 25-year-old man with 1-year history of progressive back pain radiating to both legs. His diagnosis was dorsal intraspinal extradural cystic lesion longing from the level of T11 to L2 on magnetic resonance imaging.
OUTCOME MEASURES: The patient's pain levels were noted as he reported. Physiologic outcome was assessed on pre- and postoperative motor and sensory examination.
METHODS: The patient underwent a T11–L2 laminotomy and radical cyst wall resection was performed. A small communication with the subarachnoid space was seen at the level of T12. It was sealed with tissue fibrinogen after repair with primary suture. Titanium miniplates were used for laminoplasty.
RESULTS: Follow-up magnetic resonance imaging demonstrated cyst resolution, and neurologic examination revealed no sensory and motor deficit.
CONCLUSION: Extradural arachnoid cysts are primarily treated with total removal of the cyst wall and closure of the dural defect. Surgical treatment is curative for this rare lesion.

Keywords: Arachnoid cyst; Cystic lesions of spine; Spinal extradural lesions; Laminoplasty; Spinal cord compression; Neurogenic claudication

Introduction

Extradural arachnoid cysts, either congenital or acquired, are rare expanding lesions in the spinal canal [1]. These cysts are reported to develop in any location, although they are most commonly found in the thoracic spine [2]. They are more common in males and their peak incidence is the second decade of life [2–4]. They are usually found posterior to the spinal cord but have been described in the posterolateral and anterior positions also [2].

The etiology of spinal extradural arachnoid cysts remains unclear. It is reported that they are extradural outpouchings of arachnoid that communicate with the intraspinal subarachnoid space through a small defect in the dura [2,5].

Case report

A 25-year-old man presented with low back pain radiating to both legs especially after standing still and/or bending forward. He also described leg cramps awaking him from his sleep. Only leg rising test was positive at 50 to 60 degrees in both extremities on neurologic examination.

FDA device/drug status: not applicable.
Author disclosures: none.

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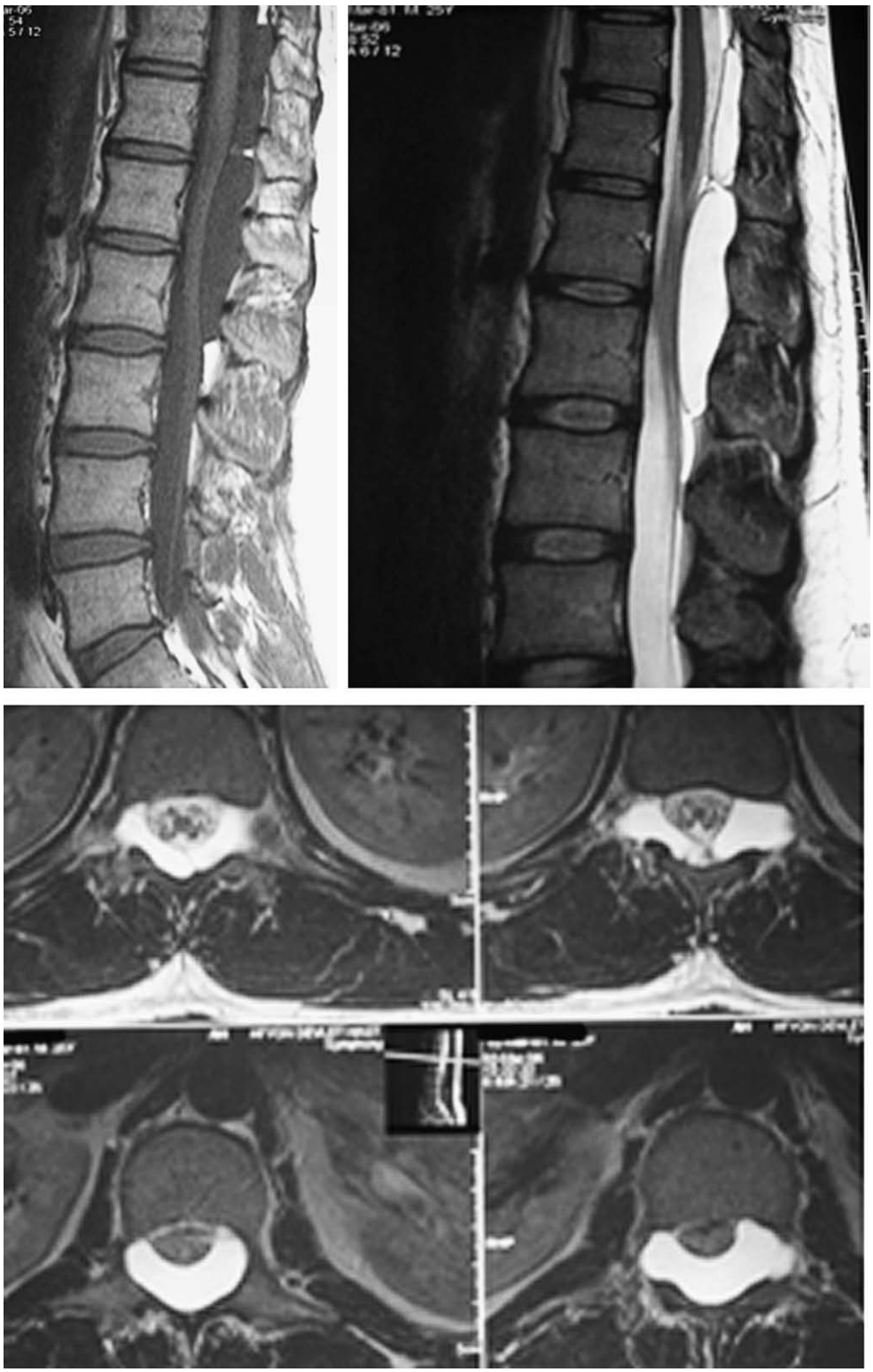

Fig. 1. Preoperative (Top Left) sagittal T1-weighted, (Top Right) sagittal, and (Bottom) axial T2-weighted magnetic resonance imaging of the patient.

There was no history of traumatic injury, lumbar puncture, or infection.

Magnetic resonance imaging (MRI) of thoracolumbar spine demonstrated a dorsally located intraspinal-septated cystic lesion extending from the levels of T11 to L2, and also into the neural foramina bilaterally at some segments, compressing the thecal sac to the ventral side (Fig. 1). The cystic lesion was hypointense on T1-weighted images and