Title
Back Pain and Spinal Cysticercosis.

Journal
Journal of clinical neurology (Seoul, Korea), 13(1)

ISSN
1738-6586

Authors
Santos, Pauline Joy F
Suzuki, Shuichi
Vadera, Sumeet

Publication Date
2017

DOI
10.3988/jcn.2017.13.1.114

pISSN 1738-6586 / eISSN 2005-5013 / J Clin Neurol 2017;13(1):114-115 / https://doi.org/10.3988/jcn.2017.13.1.114

Back Pain and Spinal Cysticercosis

Pauline Joy F Santos
Shuichi Suzuki
Sumeet Vadera

Department of Neurosurgery and Neurology, University of California, Irvine Medical Center, CA, USA

Dear Editor,

Neurocysticercosis is a common parasitic disease of the CNS that is caused by a pork tapeworm (*Taenia solium*). However, involvement with the spine is uncommon. This report highlights spinal cysticercosis as a cause of low back pain, which is of special interest due to its rare etiology, reportedly accounting for only 1.2% to 5.8% of all cases of neurocysticercosis. Furthermore, the intraspinal type is even more rare, with only 53 cases reported up to 2010.[1]

A previously healthy 46-year-old man presented with low back pain radiating to the legs. At the initial neurological examination he was awake and alert, with normal cognitive function. There was no cranial nerve impairment or weakness in the upper extremities. He reported subjective pain in the lower extremities, especially in the dorsal-to-lateral aspect of the thighs, calves, and feet bilaterally. However, there was no apparent sensory impairment in any modality, including position sense. His muscle bulk was also normal. There was trivial weakness of left planter flexion and dorsiflexion. Coordination was intact, and deep tendon reflexes were symmetric and within normal limits, with no pathological reflexes suggestive of a long tract sign. He complained of mild ischuria. There was no meningeal sign of neck stiffness. His gait was guarded secondary to the lower extremity pain probably associated with lumbago.

Based on the neurological examination, bilateral S1 radiculopathy was suspected, with greater severity on the left. Given his age and presentation, degenerative joint disease was the most likely etiology. However, the initial MRI and CT myelogram of the lumbar spine obtained in 2012 demonstrated a cystic lesion (Fig. 1). The patient underwent laminectomy at the L4–5 and L5–S1 levels. Opening of the dura revealed exudative inflammatory material with cysts. Several cysts were observed enveloped by nerve roots, each of which was carefully dissected microscopically and sent for pathology analysis. The nerve roots were inflamed and difficult to dissect off completely. The procedure was carried out with intraoperative neuromonitoring, which revealed normal motor responses throughout the procedure. No surgical complication was identified. The pathological specimen showed typical findings of neurocysticercosis (Fig. 2).

He subsequently presented 4 years later with management noncompliance and worsening bilateral radicular-type pain in both legs in the L5–S1 distribution. A neurological examination revealed no significant weakness in the lower extremities and an intact gait. The patient's most recent MRI and CT myelogram obtained in 2016 revealed recurrent cysts that had increased in both size and number (Fig. 3). Medical treatment with albendazole was initiated. At the time of writing the patient was reluctant to receive any further surgical intervention, and so was receiving on medical management. Clinically, his lower extremity pain and lumbago had been slowly subsiding since the initiation of albendazole.

Spinal cysticercosis is rare, but it should be suspected in patients from endemic regions who complain of backache with radicular pain. The present case of cysticercosis in the lumbar spine is uncommon because cysticercosis is usually found in the thoracic cord.[1] Furthermore, even when a cyst has previously been resected, it is important to consider the risk of

Received June 7, 2016
Revised August 9, 2016
Accepted August 9, 2016

Correspondence
Pauline Joy F Santos, BA
Department of Neurosurgery and Neurology, University of California, Irvine Medical Center,
101 The City Drive, Bldg 200,
Suite 210, Orange, CA 92868, USA
Tel +1-714-456-6966
Fax +1-714-456-8284
E-mail pjsantos@uci.edu

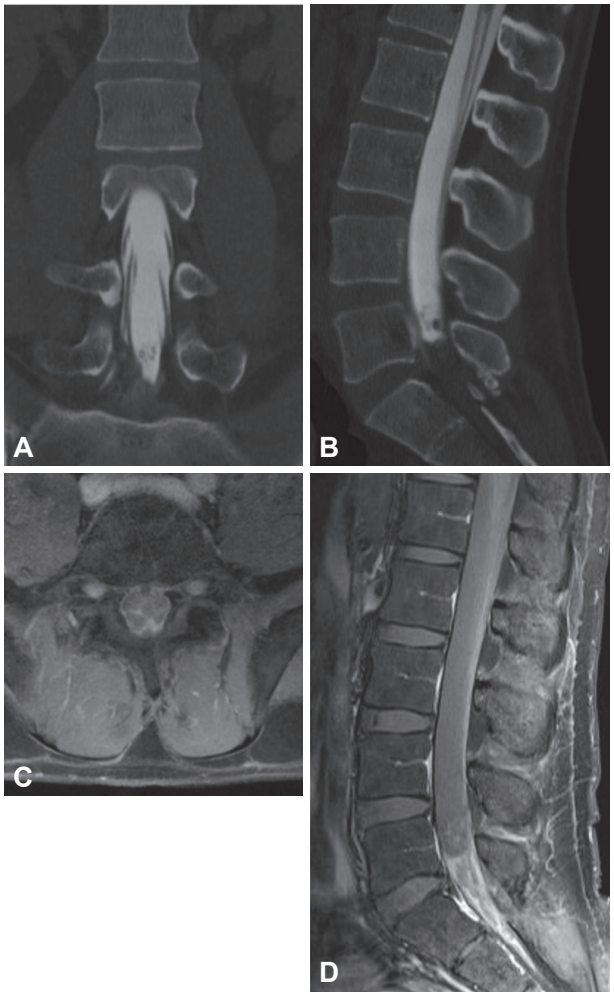

Fig. 1. CT myelogram and MRI without contrast agent showing a cystic lesion at L5 in 2012. Coronal and sagittal CT myelograms (A and B) demonstrate a cystic lesion at the L5 vertebral level, which was also evident in axial and sagittal T1-weighted MRI with contrast agent (C and D).

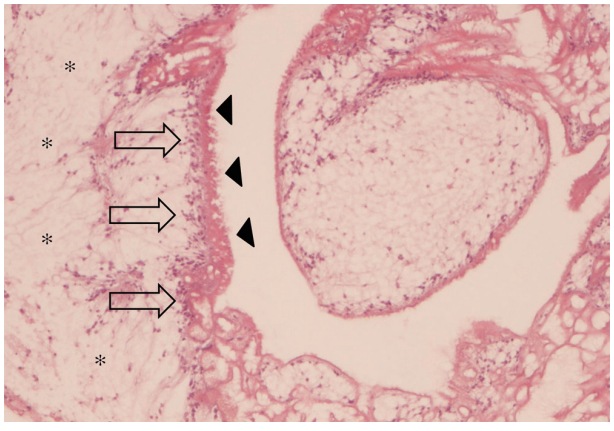

Fig. 2. Pathological specimen of spinal cysticercosis. Image shows an inflammatory reaction in the cyst wall (hematoxylin and eosin staining, ×100). There are eosinophilic outer cuticles (arrowheads), an inflammatory cellular layer (open arrows), and a myxoid thin tubular structure (asterisks) of neurocysticercosis.

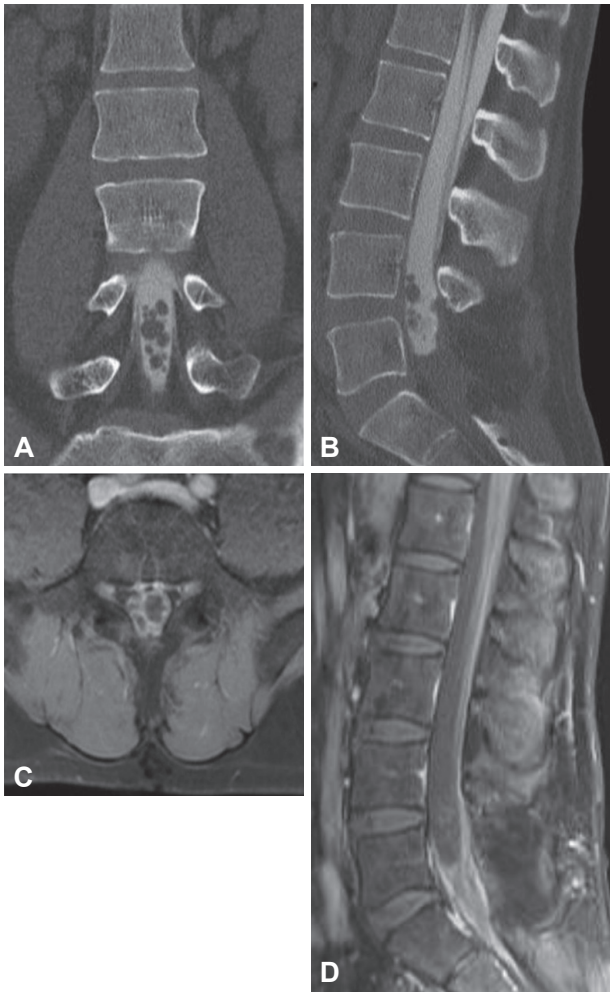

Fig. 3. CT myelogram and MRI without contrast agent showing spinal cysticercosis at the L5 level in 2016. Coronal and sagittal CT myelograms (A and B) showing the increased size and number of spinal cysticercosis at the L5 vertebral level, as also evident in axial and sagittal T1-weighted MRI with contrast agent (C and D).

recurrence and to apply appropriate imaging studies to elucidate the etiology of worsening back pain. Neuroimaging can also illustrate the importance of continuous medical treatment even after the surgical removal of cysts.

Conflicts of Interest

The authors have no financial conflicts of interest.

REFERENCE

1. Qi B, Ge P, Yang H, Bi C, Li Y. Spinal intramedullary cysticercosis: a case report and literature review. *Int J Med Sci* 2011;8:420-423.