M. Sheikh^a
M. Osman^b

Spinal Extradural Hydatid Cyst

^a Department of Radiology, Faculty
of Medicine, Kuwait University,
and

^b Department of Radiology,
Mubarak Al-Kabeer Hospital,
Kuwait

Key Words

Intraspinal hydatid cysts
CT scan
MRI investigation

Abstract

Objective and Importance: Hydatid disease of the bones is uncommon. Spinal hydatid disease presenting with compressive neuropathy is very rare. This case is presented for the rarity of this condition. **Clinical Presentation:** An adult male patient with previously treated hydatid cyst of the liver presented with symptoms of spinal nerve root compression. MRI of the spine revealed an extradural cyst which was treated with surgical excision. **Conclusion:** Patients with a known history of hydatidosis should be suspected of spinal hydatid when presenting with symptoms or signs of cord or nerve root compression.

Introduction

Hydatid disease is an infestation by the larval stages of *Echinococcus granulosus* which can encyst in a number of organs. In man, the liver and lungs are the organs most frequently involved. Bone involvement occurs in 1% of the cases, with the vertebral column being involved in 50% of these cases. Extension into the spinal canal results in spinal cord compression [1, 2]. We report a rare case of nerve root compression caused by an intraspinal

extradural hydatid cyst. To the best of our knowledge, this is the first case reported in this part of the Middle East.

Case Report

A 40-year-old male patient was admitted to the hospital with numbness in the front part of both his thighs and a feeling of heaviness in his legs while walking. An examination revealed a relative weakness of flexion at both hip joints with an almost complete foot drop of the left foot. Fourteen months earlier, he had

KARGER

Fax + 41 61 306 12 34
E-Mail karger@karger.ch
www.karger.com

© 1998 S. Karger AG, Basel
1011-7571/98/0074-0306\$15.00/0

Accessible online at:
<http://BioMedNet.com/karger>

Dr. M. Sheikh
Department of Radiology, Faculty of Medicine, Kuwait University
PO Box 24923, 13110 Safat (Kuwait)
Tel. +965 533 0473, Fax +965 533 8936
E-Mail mehraj@hsc.kuniv.edu.kw

Fig. 1. T₁- and T₂-weighted sagittal images of the lumbar spine showing the cyst extradurally at the level of L₂ (arrows). The conus is compressed. **a** T₁-weighted image. **b** T₂-weighted image.

undergone marsupialisation of a hydatid cyst of the right lobe of the liver. The chest radiograph was normal at the time of admission. MRI of the lumbar spine in T₁- and T₂-weighted scans was performed and showed a small extradural intraspinal cyst at the level of the L₂ vertebra, compressing the tip of the conus (fig. 1). There was also a cystic mass noted in the right paravertebral region. Low and intermediate signal changes were noted in the body of the L₂ vertebra on T₁- and T₂-weighted images, respectively. On the basis of these findings and previous history, hydatidosis was diagnosed and treatment with mebendazole was started and continued for 3 months. A CT scan of the abdomen with intravenous contrast medium was performed for proper evaluation of the paravertebral cyst. CT confirmed the cyst in the right paraspinal region involving the psoas muscle (fig. 2a). Magnified images of the L₂ vertebra in bone windows revealed patchy sclerotic changes in the body of this vertebra (fig. 2b). The patient underwent surgery in Germany for excision of the paraspinal and intraspinal cyst. A follow-up scan after 18 months showed no recurrence (fig. 3) and the patient was symptom free.

Discussion

Hydatid disease is endemic in some countries, including the Middle East [1]. Although cases of spinal hydatidosis have been reported, a solitary extradural location of the hydatid cyst is extremely rare [2–4]. Primary extradural intraspinal hydatid cysts are considered to arise from an undetected bony focus [5, 6].

The development of neurological signs from these cysts indicates extradural compression of the cord, which may result from the cysts involving the vertebrae; or if the cysts arise in the paravertebral area as in our case, there can be an erosion of the vertebrae causing extradural cord or nerve root compression [5–8]. CT and MRI provide different but complementary evidence for the diagnosis of hydatid disease, with CT in particular being helpful in its role to determine bone destruction. MRI, especially T₂ scans, clearly

reveals the cysts and defines their size, extent and relation to the cord [5, 7, 9, 10]. In our case, the large cyst in the right paravertebral area and the bone changes were clearly demonstrated by CT. MRI was superior in demonstrating the intraspinal cyst compressing the cord.

Concerning management, surgical decompression in association with mebendazole is recommended. The progress with this therapy is promising, but it is felt that recurrence is inevitable when vertebrae are affected by the microvascular type of hydatid cysts [5, 7, 9].

Conclusion

In conclusion therefore, patients with a known history of hydatidosis should be suspected of spinal hydatid disease when presenting with symptoms or signs of cord or nerve root compression.

References

- 1 Matossion RM, Richard MD, Symth JD: Hydatidosis: A global problem of increasing importance. *WHO Chron* 1977;55:499–507.
- 2 Medjek L, Zenini S, Hamnoon S, Hartani M: Intradural hydatidosis of the thoracic spine: Apropos of a case. *Ann Radiol (Paris)* 1991;34:251–255.
- 3 Akhan O, Dincer A, Saatci I, Gulekon N, Besim A: Spinal intradural hydatid cyst in a child. *Br J Radiol* 1991;64:465–466.
- 4 Iplikcioglu AC, Kokes F, Bayar A, Doganay S, Buharali S: Spinal invasion of pulmonary hydatidosis: Computed tomographic demonstration. *Neurosurgery* 1991;29:467–468.
- 5 Payport M, Wisoff HS, Zalman H: Vertebral echinococcosis. *J Neurosurg* 1964;21:647–660.
- 6 Pamir MN, Akalan N, Ozgen T, Erbengi A: Spinal hydatid cyst. *Surg Neurol* 1984;21:53–57.
- 7 Charles RW, Govender S, Naidoo KS: Echinococcal infection of the spine with neural involvement. *Spine* 1988;13:47–49.
- 8 Kars HZ, Hekimoglu B, Cepoglu C: Spinal epidural hydatid cyst. Radiological and ultrasonographical workup of a case. *Eur J Radiol* 1990;19:212–214.
- 9 Wan MA, Taheri SA, Babu ML, Ahangar GA, Wan H: Primary extradural hydatid cyst. *Neurosurgery* 1989;24:631–632.
- 10 Pau A, Simonetti G, Tortari-Donati P, Turtas S, Viale GL: Computed tomography and magnetic resonance imaging in spinal hydatidosis. *Surg Neurol* 1987;27:365–369.