Acta Scientific Orthopaedics (ISSN: 2581-8635)

Volume 5 Issue 8 August 2022

Case Report

A Rare Case of Spinal Cysticercosis Mimicking as Extramedullary Tumor

MA Basit and Richa Sharma*

Department of Pediatrics, SLBSGMC Ner Chowk Mandi, India

***Corresponding Author:** Richa Sharma, Department of Pediatrics, SLBSGMC Ner Chowk Mandi, India.

Received: June 24, 2022

Published: July 13, 2022

Abstract

Spinal cysticercosis is an unusual presentation of neurocysticercosis, caused by the larvae of Taenia solium. We are presenting a case of lumbar intradural extramedullary neurocysticercosis. A 26-year-old male patient, presented with low backache for two years with radiation to bilateral lower limbs. The patient was treated successfully with surgical removal of the cysts, followed by medical treatment. Intraoperatively there were severe adhesions of the intradural nerve roots of cauda equina, caused due to arachnoiditis and these adhered nerve roots (clumped together) were mimicking as intra Dural extramedullary tumor.

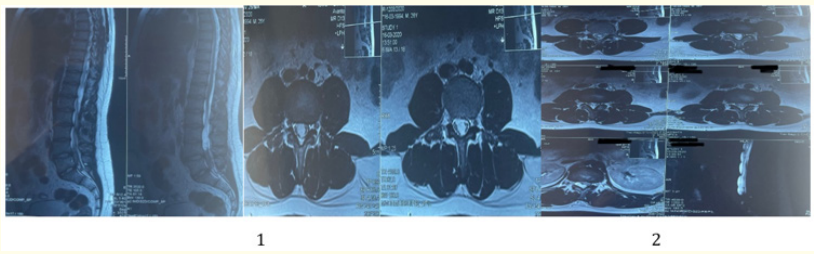
Keywords: Intradural Extramedullary; Neurocysticercosis; Arachnoiditis

Introduction

Cysticercosis is the commonest parasitic disease of the central nervous system and is caused by cysticercus cellulosae, the metacestode state of *Taenia solium* [1-3]. Distribution of cysticerci is as follows: 34% in cervical; 44.5% in thoracic; 15.5% in lumbar and 6% in the sacral region. It is an endemic condition in India, African, and southeast Asian countries [7-9]. We present case of spinal intradural extramedullary cystic lesion at L3 L4 level, cystic lesions (two in number) were treated by surgical excision, the solid lesion was clumped nerve roots of cauda equina at L4L5 level due to arachnoiditis, that was left alone as it was due to the reaction to cysticercus celluloase. Patient was followed by medical treatment.

Presentation

A 26 years old male patient suffered from severe low back pain for last 2 years and pain was radiating to both lower extremities. Neurological examination showed no motor deficit.



1 2

Figure 1 and 2: Showing ill-defined signal intensity lesion in the canal extending from L3-L5 level with solid and cystic component with heterogenous enhancement with adjoining clumped nerve roots.

Operative procedure

We performed L3L4 laminectomy. Intraoperatively, there was no extradural lesion at L3L4 level, we performed longitudinal durotomy to identify the intradural extramedullary lesion. After dissection we could easily remove two well capsulated cysts adherent to nerve roots and adjacent dura. After a more dissection of cauda equina we found clumped nerve roots due to adhesions giving as solid mass like appearance distal to cystic lesions, we did not try to breakdown adhesions between nerve roots of cauda equina as it would have led to neurodeficit. Dura was closed with continuous sutures and wound closed after irrigation with saline.

Post operatively, the patient showed improvement in low back pain and there was not radiation of pain to lower extremities. Patient was discharged on 5th postop day. MRI after surgery shoed complete excision of cystic lesions, but the clumped mass of cauda equina nerve roots due to arachnoiditis in response to cystic lesion was same.

Histopathology

Histopathology showed the presence of larval forms of cysticercus with a fibrous pseudocapsule.

Follow-up

Patient was medically treated with Albendazole (15mg/kg/day) for a period of 12 weeks to prevent recurrence. Steroids were given to reduce the inflammatory reaction during the early postoperative period.

Discussion

Cysticercosis is one of the most common parasitic infection of the central nervous system and mode of infestation is fecal-oral. The incidence of spinal cysticercosis ranges from 1% to 3% [3,10] Colli., *et al.* Spinal cysticercosis occurs either in the subarachnoid space or in the spinal cord. Subarachnoid location of the spinal cysticercosis occurs most frequently in approximately 80% of the cases [1,12]. There are many routes of disseminating parasite to spinal subarachnoid space. Cerebrospinal fluid (CSF) being the commonest. Intramedullary cysticercosis is considered, as a result, from the hematogenous spread. Nearly 50% of patients who underwent surgery for the spinal cysticercosis have suffered recurrent symptoms attributed to arachinoidal inflammation [11,14,15]. MRI is the investigation of choice for evaluating the spinal cysticercosis [9]. Because MRI can demonstrate the various pathophysiological stages of the spinal cysticercosis, there are no unique radiological features [7,8,15]. Furthermore, the complete assessments of entire neuroaxis should be done as solitary lesion is extremely rare. In our case there was no other lesion were found.

Figure 3: Showing microscopic features consistent with cysticercous cellulosae with superimposed inflammation.

Figure 4: Shows gross specimen after surgical excision.

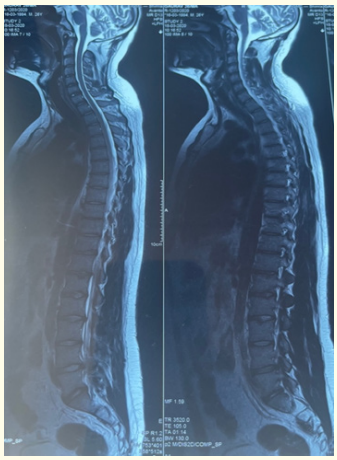


Figure 5

Hamed., *et al.* [18] suggest that surgery is the best treatment for spinal cysticercosis and for the exact diagnosis due to unavailability of immunologic tests. Albendazole and Praziquantel are the cysticidal drugs of choice. As they destroy most of the spinal and intracranial parasites, Co-administration of steroid is warranted to prevent neurological deterioration due to inflammatory reaction.

Conclusion

Spinal cysticercosis is extremely rare and Spinal neurocysticercosis must be considered in differential diagnosis of low backpain with radiculopathy in high-risk populations.

Bibliography

1. Alsina GA., *et al.* "Spinal neurocysticercosis". *Neurosurgical Focus* 12 (2002): e8.
2. Chang KH and Han MH. "MRI of CNS parasitic diseases". *Journal of Magnetic Resonance Imaging* 8 (1998): 297.
3. Ciftci E., *et al.* "Intradural-extramedullary spinal cysticercosis: MR imaging findings". *Computerized Medical Imaging and Graphics* 23 (1999): 161.
4. Paterakis KN., *et al.* "Primary spinal intradural extramedullary cysticercosis". *Surgical Neurology* 68 (2007): 309.
5. Colli BO., *et al.* "Cysticercosis of the central nervous system. II. Spinal cysticercosis". *Arquivos de Neuro-Psiquiatria* 52 (1994): 187.
6. Kishore LT., *et al.* "Intermedullary spinal cord cysticercosis ‚Äì A case report and literature review". *Indian Journal of Pathology and Microbiology* 34 (1991): 219.
7. Do Amaral LL., *et al.* "Neurocysticercosis: Evaluation with advanced magnetic resonance techniques and atypical forms". *Topics in Magnetic Resonance Imaging* 16 (2005): 127.
8. Garcia HH and Del Brutto OH. "Imaging findings in neurocysticercosis". *Acta Tropica* 87 (2003): 71.
9. Garcia E and Sotelo J. "A new complement fixation test for the diagnosis of neurocysticercosis in cerebrospinal fluid". *Journal of Neurology* 238 (1991): 379.
10. Torabi AM., *et al.* "Multilevel intramedullary spinal neurocysticercosis with eosinophilic meningitis". *Archives of Neurology* 61 (2004): 770.
11. Colli BO., *et al.* "Spinal cord cysticercosis: Neurosurgical aspects". *Neurosurgical Focus* 12 (2002): e9.
12. Leite CC., *et al.* "MR imaging of intramedullary and intradural-extramedullary spinal cysticercosis". *AJR American Journal of Roentgenology* 169 (1997): 1713.
13. Choi KB., *et al.* "Herniated lumbar disc combined with spinal intradural extramedullary cysticercosis". *Journal of Korean Neurosurgical Society* 48 (2010): 547.
14. Mohanty A., *et al.* "Spinal intramedullary cysticercosis". *Neurosurgery* 40 (1997): 82.
15. Rahalkar MD., *et al.* "The many faces of cysticercosis". *Clinical Radiology* 55 (2000): 668.
16. Colli BO., *et al.* "Results of surgical treatment of neurocysticercosis in 69 cases". *Journal of Neurosurgery* 65 (1986): 309.
17. Garcia HH., *et al.* "Current consensus guidelines for treatment of neurocysticercosis". *Clinical Microbiology Reviews* 15 (2002): 747.
18. Hamed SA and El-Metaal HE. "Unusual presentations of neurocysticercosis". *Acta Neurologica Scandinavica* 115 (2007): 192.