

## Cervical Intradural Extramedullary Hydatid Cyst

ALP İSKENDER GÖÇER, METİN TUNA, FARUK İLDAN,  
HÜSEYİN BAĞDATOĞLU, SEBAHATTİN HUACIYAKUPOĞLU

Çukurova University, School of Medicine Department of Neurosurgery Balcalı-Adana, Turkey

**Abstract :** A case of intradural extramedullary hydatid cyst with spinal cord compression located in the cervical region is presented. The diagnosis was made preoperatively on the basis of MRI findings. Many cases of cranial or spinal extradural hydatid cyst have

been reported in the literature, but intradural extramedullary location of the cyst in the cervical region is extremely rare.

**Key Words :** Echinococcosis, hydatid disease, magnetic resonance imaging, spinal cord.

### INTRODUCTION

CNS (Central Nervous System) involvement in hydatid disease occurs in 0.9 % to 2.1 % of cases (1,3). Hydatidosis of the CNS is caused by cystic modification of the larval stage of echinococcus granulosus. This tapeworm is common in herbivores such as sheep and goats but rare in humans. Man, intermediate host, is infected by ingestion of the ovum. Cerebral and spinal extradural hydatid disease are encountered in the literature but spinal intradural extramedullary location of the cyst is extremely rare (3,5,6,10). A case of cervical intradural extramedullary hydatid cyst is presented with a review of the literature.

### CASE REPORT

A fortyfive-year-old woman was admitted with complaints of low back and bilateral leg-pain. She had been operated with the diagnosis of lumbar intravertebral multiple hydatid cysts 5 years ago. Her complaints had resolved following the operation and she had been discharged with flubendozol therapy. Two years later, she was readmitted with complaints of paraparesis, urine and faecal incontinence. Radiological examination had revealed L3 compression fracture, gibbus formation and multiple cysts in the vertebral body. Cyst material was removed in the second operation and she had partially recovered. The follow-up period was uneventful for 3 years. Then she

was readmitted with complaints of pain in the right arm and weakness of the limbs. Neurological examination revealed respiratory insufficiency, quadriparesis and hypoaesthesia below the level of C7. Magnetic resonance imaging (MRI) demonstrated an intradural extramedullary cystic mass at the level of C5-7 (Fig. 1). The diagnosis of hydatid cyst was made on the basis of MRI findings and the previous history.

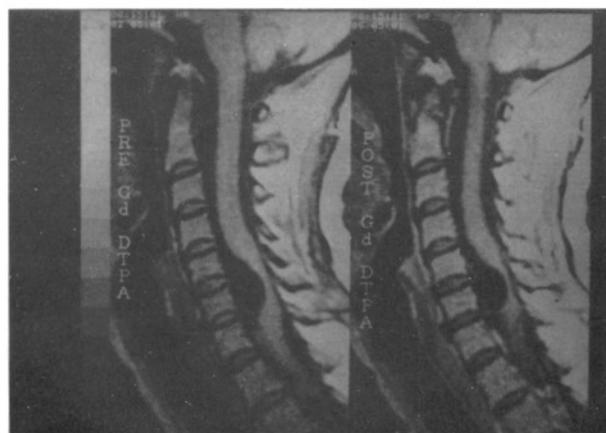


Fig. 1 : MRI showing intradural extramedullary cystic mass between C 5-7.

**Operation:** After C6-7 total laminectomy, the dura mater was found entirely intact but showed slight bulging on the right side. After opening the dura the cyst was seen and dissected easily from both the dura and the medulla spinalis and removed in toto

(Fig. 2). Pain, hypoaesthesia and paresis of the arm improved following removal of the hydatid cyst. Paraparesis, urine and fecal incontinence were still present when she was discharged from the hospital.



Fig. 2 : Operative photograph showing cervical intradural extramedullary hydatid cyst.

### DISCUSSION

The incidence of primary spinal hydatid disease of the vertebrae is less than 1% in hydatidosis (2,3). Many cases with cerebral and spinal extradural hydatid disease have been reported in the literature, but none had cervical intradural extramedullary location. Only one case of infected intradural extramedullary hydatid cyst at the foramen magnum with recurrent spinomedullary compression, described by Mathuriya (6) has been reported in the literature to date. Long-term results of surgery for spinal hydatid cyst show that at least half the patients require reoperation (12). In our case, we removed the lumbar cysts subtotally and applied flubendazole treatment (4,9).

Although satisfactory results have been reported with flubendazole treatment (9), haematogenous

spread could not be prevented. The incidence of primary involvement of the vertebrae is about 1% in hydatidosis (10). We considered our case as primary involvement of the vertebrae, because hydatid cyst was not demonstrated in other organ systems. As in our case, pain and quadriplegia are the initial symptoms of intradural extramedullary hydatid cyst due to compression of the cord. Plain X-ray of extradurally localised hydatid cysts shows bone destruction and calcified fields thereby supporting the diagnosis (5). But in intradurally localized cysts, MRI appears to be the most suitable method for diagnosis (2,7,8,11). The observation of cervical intradural extramedullary hydatid cyst in a patient with lumbar extradural hydatid cyst can be coincidental. Since the dura mater was intact in both operations, the intradural location of the cyst was probably due to haematological spread and flubendazole treatment does not seem to protect spreading by such a route.

**Correspondence :** Dr. Alp İskender Göçer  
Çukurova University, School of Medicine  
Department of Neurosurgery  
Balcalı-Adana, Turkey

### REFERENCES

1. Apt WL, Fierro JL, Calderon C, Perez C, Mujika P: Vertebral hydatid disease. Clinical experience with 27 cases. *J Neurosurg* 44:72-76, 1976
2. Bavbek M, İnci S, Tahta K, Bertan V: Primary multiple spinal extradural hydatid cysts of the literature: case report and review. *Paraplegia* 30:517-519,1992
3. Charles RW, Govender S, Naidoo KS: Echinococcal infection of the spine with neural involvement. *Spine* 13:47-49,1988
4. Fournier JP, Marty P, Bernard E, Leloire P, Dellamonica P, Le-Fichoax Y: Spinal hydatidosis treated by albendazole. *Pathol Biol Paris*. 33:611-613,1985
5. Kars HZ, Hekimoğlu, B, Cepoğlu C: Spinal epidural hydatid cyst: radiological and ultrasonographic workup of a case. *Eur J Radiol* 11 (3): 212-214,1990
6. Mathuriya SN, Arora OP, Khosla VK, Prabhakar SK, Chopra JS, Kak VK: Infected intradural hydatid cyst at foramen magnum. A case report. *Clin Neurol Neurosurg* 87:283-286,1985
7. Ögüt AG, Kanberoğlu K, Altuğ A, Çokyüksel O: CT and MRI in hydatid disease of cervical vertebrae. *Neuroradiology* 34:430-432,1992
8. Özer AF, Özek MM, Pamir MN, Erzen C: Magnetic resonance imaging in the diagnosis of spinal hydatid cyst disease. Case report. *Paraplegia* 31:338-340,1993
9. Porat S, Robin GC, Wertheim G: Hydatid disease of the spine causing paraplegia. The combined treatment by surgical drainage and mebendazole: a case report. *Spine* 9:648-653, 1984
10. Suri S, Singh I, Gulati DR, Sodhi JS: Hydatid cyst causing spinal compression. *Paraplegia* 15:333-337,1978
11. Tekkök İH, Benli K: Primary spinal extradural hydatid disease: report of a case with magnetic resonance characteristics and pathological correlation. *Neurosurg* 33:320,323,1993
12. Turtas S, Viale ES, Pau A: Long-term result of surgery for hydatid disease of the spine. *Surg Neurol* 13:468-470,1980