Cervical Intradural Extramedullary Hydatid Cyst

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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 extramedullar 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 forty-five-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 flubendazole therapy. Two years later, she was readmitted with complaints of pain in the right arm and weakness of the limbs. Neurological examination revealed respiratory insufficiency, quadriaparesis 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 C5-7.

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, hypoesthesia 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.

DISCUSSION

The incidence of primary spinal hydatid disease of the vertebrae is less than 1% in hydatidosis (23). 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.

References