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Hydatid Cyst Disease of the Spine: a Case Report.

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Introduction

Hydatid cyst disease is a significant clinical problem in endemic regions.⁽¹⁾ Cystic echinococcosis is a zoonosis caused by the larval stage of *Echinococcus granulosus*.⁽¹⁾ it has an indirect life cycle, with canines (mainly dogs) as definitive hosts, and herbivores and human as intermediary hosts.⁽²⁾ Hydatid cyst disease in human commonly affecting the liver and lungs.⁽³⁾ The bone involvement is rare in hydatid disease and represents less than 2 % of all cases. The most common bone localization is vertebral hydatidosis which is seen in 44 %of the patients.⁽⁴⁾ The dis-

ease occurs by direct extension from a pulmonary or liver infestation ⁽⁵⁾ or, less common, begins primarily in the vertebral body.⁽⁶⁾ Hydatid disease of the spine is rare and has poor prognosis, ⁽⁷⁾ in such condition; the severity of disease is related to the neurological complications.⁽⁴⁾ Paraplegia is the most serious complication which is caused by compression of the spinal cord by the cysts.⁽⁷⁾ The treatment relies on the actual surgical removal of cysts although the bone involvement is quite challenging. The poor outcome of posterior decompression and laminectomy for intraosseous spinal hydatid disease were reported by several

authors.⁽⁸⁾ In endemic countries, prevention and health education are the best measures.⁽⁴⁾

Case Presentation:

Herein we report a 55-year-old man who referred to our outpatient clinic due to back pain and progressive numbness and weakness of both lower extremities and disability in walking. The condition was per diagnosed as disc herniation. In physical examination, the patient had low back pain, weakness and paresthesia of both lower extremities .In imaging work ups Magnetic resonance imaging (MRI)revealed an epidural cystic lesion extending from T6 to T7. Laboratory analyses were performed. Total blood cell counts, erythrocyte sedimentation Rate (ESR), complete biochemical serum and urine parameters, coagulation tests were within normal ranges. ELISA for Echinococcus granulosus was positive. Daily doses of albendazole 400 mg (twice per day) were used for 2 weeks and then the patient underwent surgical intervention. The cyst had been totally removed. Bilateral laminectomy, medial facetectomy and extra Dural cord decompression were done. Cystic lesion was shown to be hydatid cyst by histopathologic confirmation after the surgical removal.

No neurological bladder, or bowel symptoms was seen in the postoperative period. The patient received antibiotic (cephalexin 500mg four times per day) in addition to daily albendazole (400 mg twice daily for 3 months). Following 3 months of rehabilitation program his neurological status revealed. He was symptom-free after operation in three years follow up.

Discussion:

Hydatid disease is a health problem in the endemic areas such as Iran.⁽⁹⁾ The condition can easily be confused with tuberculous spondylitis where tuberculosis is endemic too. Misdiagnosis could result in serious consequences. Spinal hydatid disease is usually situated in the dorsal region and generates medullary or radicular symptoms according to its location.⁽¹⁰⁾ The symptoms present due to compression effect of the cysts.⁽¹¹⁾ The most important clinical manifestations of the condition are paresthesia , paraparesis , paraplegia and sometimes sphincteric dysfunction.⁽¹²⁾ Neurological signs are usually very slow, but will result in paraplegia in 25-50% of patients.⁽¹³⁾ There are 5 major groups of spinal hydatid disease which may causes paraplegia in the patients.:(¹) Primary intramedullary cysts, (²) intradural extramedullary cysts, (³) extradural intraspinal cysts, (⁴) hydatid disease of the vertebra, and the last (⁵) paravertebral hydatid disease. This classification was done in 1981 by Braithwaite and Lees.⁽¹⁴⁾

MRI is the most beneficial method in the diagnosis of spinal hydatidosis.⁽¹⁵⁾ It reveals precise anatomic localization and extension of the spinal hydatid disease. Overall MRI is the superior method in the diagnosis than computed tomography scan (CT).⁽¹⁶⁾

On the other hand CT scanning may be more convenient and advantageous in follow up of bone lesions progression which is associated with this disease.⁽¹⁴⁾

Cystic lesions require urgent surgery. Although, medical antihelminthic treatment (mebendazole or albendazole)

could be an alternative for uncomplicated uninfected hydatidosis. The major factor influencing the surgical approach is the degree of spinal canal involvement.⁽¹⁷⁾

In the report of Golematis et al ⁽¹⁸⁾ it was shown that albendazole decreased the size of the large cysts and in some cases cured the smaller ones. The effectiveness of medical treatment can be evaluated with follow-up CT scan and MRI which may show the gradual shrinkage or calcification of the cysts in one hand or maintenance of the cyst size for 1 year follow up in the other hand.⁽¹⁹⁾

Recurrence (30% to 100%) remains as a major problem in spinal hydatid disease.⁽¹²⁾ It can cause persistent pain and significant neurologic deficits. In such cases a high morbidity and mortality and poor prognosis is predictable. Albendazole treatment which can prevent the late recurrence should be started in the post-operative stage and continues for two years.⁽¹⁷⁾

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