CASE REPORT

ISOLATED HYDATID DISEASE OF THE ILIAC BONE

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Hydatid disease of the bone usually is asymptomatic and is found as an accidental finding during unrelated imaging. However, they can become symptomatic due to enlargement and pressure effect or being infected by bacteria. Hydatid disease usually involves multiple organs (such as liver, lungs and brain). In our case, hydatid disease had involved bone and the patient presented only with a chronic hip pain without other symptom or sign. Here, a case of isolated ilium hydatidosis is reported.

Keywords: Hydatid disease, bone, Echinococcosis, *Echinococcus*

J Ayub Med Coll Abbottabad 2015;27(4):950–2

INTRODUCTION

Hydatid cyst is a parasitic infection caused by larva of tapeworm of the genus *Echinococcus. Echinococcosis* is endemic in Asia, North Africa, South and Central America, North America, Canada and the Mediterranean region as well as Iran as a country in this region. Some regions within Iran are endemic for hydatidosis. Higher cases of hydatidosis have been reported from northeast (Mashhad) and central (Hamadan and Arak) of Iran.[1–3]

Cystic *Echinococcosis* is a disease of younger adults and usually diagnosed at age 30–40 years. Because the cyst grows slowly during the time and rarely is diagnosed during childhood or adulthood.

The liver is the most common site affected by hydatid disease (50–70%) followed by the lung, spleen, kidney, bones, and the brain.[4,5] Hydatid disease of the bone is very rare and occurs in 1–2.5% of cases, which in half of cases affects the spine.[6]

Here, we report a case of isolated hydatid cyst in the ilium without extra-osseous involvement.

CASE REPORT

A 22-year old man from Turkmenistan (of the soviet system) referred to our clinic with the complaint of chronic left hip pain since one year ago. During this period, he had been to different doctors in various countries and had taken different drugs without improvement.

Past medical history and family history were unremarkable. In physical examination there was a severe motion limitation in the left hip in external and internal rotation accompanied by disability of abduction in the same leg. In the X-ray of the region, there was a large destruction in the left iliac cortex and acetabulum with sharp borders and sclerosis around the lytic lesions with remarkable expansion (Figure-1).

Hip CT-scan showed the same round lytic lesion in the iliac Wing, ischium and pubis (Figure-2). MRI imaging showed a large multifocal lesion; dark in T1 and heterogeneously bright in T2 (Figure-3).

Suspicion of malignancy, complete workups was performed several times but never a biopsy had been done.

On the basis of these findings, thinking of hydatid cyst, serologic tests were requested that all were highly positive for *Echinococosis*. In ultrasonography, daughter cysts in the main suspicious cyst were reported. By diagnosis of advanced hydatid cyst, other organs including the lungs and liver were evaluated by means of X-ray, ultrasound and CT-scan and so. Involvement of other organs was ruled out by these assessments and diagnosis of isolated bone hydatid disease was made.

Based on this diagnosis, the patient underwent surgery. A Complex major operation was done with complete resection of the left pelvis from sacrum up to the medial part of the opposite side (contra lateral) pubis and ischium. In return the same size allograft was selected for repairing of the pelvis and fixed with 2 plaques in the sacrum and 1 in the pubis, simultaneously a total hip joint replacement was performed (Figure-4).

Soon after operation in the second day, continuous positive motion (CPM) of the hip was started and a few days after being under monitoring he was discharged from ICU and started walking in the form of non-weight bearing (NWB) by crutches.

Chemotherapy with Albendazole was performed for six months with four cycles at a dose of 400 mg twice a day for 4 weeks followed by a 2-week rest without therapy. After that, the patient was evaluated for other organs involvement that was negative.

Up to now within one year of treatment, he has been evaluated for any kind of organ involvement by hydatid cyst twice but noting has been found and now his general condition is well with a complete range of motion in his leg without problem.

Figure-1: X-ray of the pelvis (on arrival)

Figure-2: CT-scan of the pelvis (after progression)

Figure-3: MRI of the pelvis with contrast

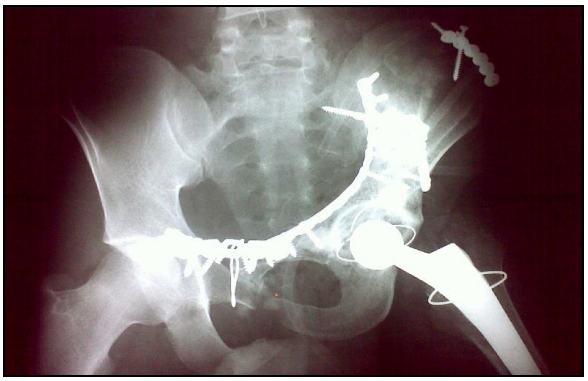

Figure-4: Post-operative view- application of the same size allograft and prosthesis for repairing of the pelvis

DISCUSSION

Hydatid disease is a worldwide parasitic infectious disease caused by ingestion of food (especially fruits and vegetables) contaminated with faeces of reservoir animals. Different genus of *Echinococus* cause the problem in various parts of the world[7] but *Echinococus granolosus* and *multilocularis* are more common in the Middle-East and Asia, with incidence rate of 2–6% of population[7] that usually tends to make cysts in the liver and lungs. They usually grow slowly during the years and even decades and often are found incidentally in an unrelated imaging; because they are usually asymptomatic. The probable symptoms are due to mass effect. Problems due to cyst obstruction effects and pyogenic abscess are other complications of hydatid disease that occur in less than 10% of the patients.[7]

According to the organ involved, different methods may be used for diagnosis of hydatid disease such as ultrasonography, CT scan, MRI and serologic and immunologic tests (enough sensitive and specific especially for liver cysts but not for lung involvement yet).[8] Plain film findings are usually non-specific for bone hydatid disease and immunological tests are negative.

Although the best treatment of symptomatic cysts is surgery by using of anti-cystic agents before the resection, this surgery can be associated with dangerous anaphylactic reactions or seeding of daughter cysts into the other parts of body may occur if even one cyst ruptures or its content leaks out.[7]

In bone hydatid disease in addition to surgical removal, medical treatment is required. Anthelmintic agents (e.g., albendazole and mebendazole) are usually used before and after the surgery.[9,10] The first choice of treatment is albendazole due to its greater absorption from the alimentary canal and higher plasma levels.[10]

In conclusion, it seems that diagnosis of bone hydatid disease should be suspected in each patient with chronic bone pain in an endemic area.

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