HYDATID DISEASE OF FEMUR

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Introduction

Hydatic disease of the bone is a rare clinical condition. The incidence of osseous hydatidosis is reported to be upto 1% in endemic areas. This entity often remains undiagnosed till operation or sometimes even till autopsy.

Case Report

A 43-year-old serving JCO was admitted in BHDC on 5th Oct 96 with complaints of pain in the right hip of 3 months duration. This pain was aggravated on prolonged walking. There was no history of injury or associated fever. General physical examination revealed no abnormality. Local examination revealed deep tenderness over greater trochanter. Movements of the hip though full range were painful. Routine haematological investigation showed no abnormality except eosinophilia of 8%. Plain radiograph of the right hip revealed an osteolytic lesion in the neck, greater trochan-

Fig. 1 : X-ray showing the osteolytic lesion in the neck and trochanteric region of the femur

ter region extending 3 inches to the subtrochanteric region (Fig 1). FNAC was attempted but the needle was unable to pierce the intact overlying cortex.

The patient was taken up for surgery on 14 Oct 96. Through a window in the trochanter a cystic cavity (8 x 5 cms) was seen in the neck extending to the subtrochanteric region. On curettage, firm, white membranous cyst wall, along with a few round white cysts were removed and sent for histopathology. The bone cavity was lavaged and irrigated-super saturated saline packs were kept for 10 minutes. The cavity was filled with Unilab bone grafts and internal fixation was done by Dynamic Hip Screw (Fig 2). Post operatively recovery was uneventful. Ultrasonography of chest and abdomen was done to exclude Hydatid disease of the more common sites. He was given Albendazole for 3 weeks.

The histopathological examination revealed bony trabeculae, fibrous tissue and lamellated, eosinophilic, acellular material with evidence of a germinal layer at places (Fig 3). Post operatively an ELISA test for Echinococcus antibody in serum was carried out, the value obtained was 0.912 (control value upto 0.313 negative for Echinococcus antibody).

The patient was followed for 18 months. He had remained asymptomatic and showed no evidence of recurrence.

Discussion

Hydatid disease of bone is a rare condition. The incidence of osseous hydatidosis is 1% of all cases of hydatid disease [1]. It is due to a primary infection of

Fig. 2 : X-ray showing curettage, bone grafting and fixation of the femur by dynamic compression hip screw

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Fig. 3 : Microphotograph of the histopathology showing bony trabeculae, fibrous tissue and lamellated acellular material with evidence of germinal layer at places

bone (Dew, 1928 as quoted by TJ Mills) [2]. Amongst the long bones the lesions usually involve the femur, tibia or humerus-and these lesions tend to present with pain or pathological fracture. The disease manifests itself differently in bones than in other tissues due to the mechanical resistance that bone offers to the growth of the parasite and the cysts. The disease invariably starts in the metaphysis. Pressure absorption of bone occurs and there is dilatation of bone space. If the germinal membrane of the cyst ruptures the daughter cysts and scolices gain access to adjacent bone along the canals and the bone eventually becomes a friable honeycomb.

Clinical manifestations of hydatid disease in bone may take 10-20 years to become evident. Bone lesions have been reported both in the axial and in the long bones. The lesions in the vertebrae take a serious turn because of rupture into the spinal canal leading to paraplegia. This is often misdiagnosed as Pott's paraplegia [3].

Roentgenographically a moth eaten appearance is apparent. Secondary infection has been thought to play an important role in killing the parasite. It is difficult to arrive at a preoperative diagnosis and it is estab-

lished by histopathological examination of the curetted material.

Until recently the treatment of osseous hydatid disease has been entirely surgical. Curettage and bone grafting of the lesion is the usual modality of treatment adopted. Hooper and Lean, 1977 [1] and Duran 1978 [4] have advocated thorough mechanical curettage to remove the cysts. Internal fixation is mandatory in case of pathological fractures and in large hydatid cysts in the lower limbs. Resection of the bone is only possible if the affected bone is a flat bone like scapula, rib etc.

Clinical sterilisation of the scolices is advocated. Earlier it was done using 0.5% formalin. Nowadays silver nitrate or hypertonic saline are used. Formalin produces extensive tissue necrosis, severe post operative shock and toxicity, hence it's use is discouraged. Hypertonic saline was used in our case. Most scolical agents do not kill microscopic daughter cysts therefore the danger of recurrence is always there. Effective chemotherapy is essential and is definitely beneficial. Mebendazole has been used with success [3] though Albendazole is reportedly more effective to kill the parasite [5]. This case highlights the importance of considering Echinococcus infestation of bone in the differential diagnosis of destructive osseous lesions in an endemic area.

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