Hydatid Disease in Femur: A Case Report

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Hydatid disease is rare disease in bone. But in areas where hydatid disease is endemic, osteolytic lesion of bone must always be considered as hydatid disease in differential diagnosis. We are presenting a case of hydatid disease of bone of interest because it affects bone as cyst formation and pathological fracture.

Key words: Hydatid disease, femur

Introduction

Hydatid disease is endemic in many parts of the world including Iran, Iraq, Greece, South Africa, India and man gains infection from dogs, sheep, cattle, Pigs and camels. Involvement of the liver by the embryos is the commonest sequel producing cysts but bone is involved in only approximately 1%. 1 The lesion in bone may lie dormant for 10-20 years. 2 It occurs in long bones such as the femur, humerus and tibia but they also arise in spine. Flat bones may be affected less frequently. The hydatid cyst begins in the metaphysis, giving rise to multilocular cyst causing scalloping of the cortex but with little expansion, sclerosis or periosteal reaction. If the cortex is eroded, the soft tissues are involved, calcification occurs in the latter which is typical of the lesion. 3 The articular surfaces are never breached. Pathological fracture may occur.

Case Report

A 60 years old lady presented on April, 2009 with history of unable to walk due to fall in ground. She had dull aching pain at left thigh for one year. On Roentgenograms of left femurs there was osteolytic lesion in whole length with pathological fracture (fig. 1). Laboratory investigations revealed haemoglobin of 10.5 g/dl, ESR 80 mm in 1st hour, TC of WBC 8,500/cmm, USG – findings reveals a small renal cyst. Surgery was planned as curettage, bone grafting and internal fixation by IL nail. But during forming window, embryos of Echinococcus granulosus coming out (fig. 2). Whole marrow cavity was curetted and irrigated by supersaturated saline and fixation by interlocking intramedullary nail (fig. 3). Bone graft was not done. Wound was primarily closed. Tissue from the lesion was sent for histopathological examination. Histological study reveals hydatid disease. Post operative period was uneventful and she allowed to walk on crutch. After six months of follow up patient presented with a discharging sinus.

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Figure 1. Osteolytic lesion in whole length of tibia

Figure 2. Embryos of Echinococcus granulosus

Figure 3. IL for stabilization

Discussion
Hydatid diseases are always due to primary infection, not spread from other sites. The clinical manifestation of hydatid disease in bone may take ten to twenty years to become evident. The lesion tends to present with pain or pathological fracture and occur in the thirty to fifty year old age group. Hydatid disease in bone rarely occurs in children although the infection is most probably acquired at that time.

The disease manifests itself differently in bone than in other tissues because of mechanical resistance that bone offers to the growth of parasites and cysts. The diseases start at metaphysis and spreads slowly along the line of least resistance. Pressure absorption of bone can occur so that a dilatation of bone space occurs slowly.

The periosteum and articular cartilage appear to offer some resistance to the extension of cysts. But suppuration in osseous hydatid disease is rare and as a rule it occurs following operative interference. Secondary infection especially with staphylococcus has been thought to play an important role in killing hydatid parasites.4

When a pathological fracture occurs in a long bone due to hydatid disease, the prognosis always is grave and non-union is common, as is spread of the infestation in to neighbouring tissues. Massive excision or amputation therefore was recommended as treatment by some,5 because sinus formation is an inevitable sequele of curettage.

In this case till 2010, the patient walks with walking aid with a discharging sinus at left thigh. Fracture has been united. One should remember about the hydatid diseases of bone as a differential diagnosis in osteolytic lesion in long bone though it is rare.

References