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Case Report

Hydatid disease of proximal femur: a case report

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ABSTRACT

Hydatid disease is the most common infection in Central Asia, Middle East, East Africa caused by Echinococcus which is a cestode. However infection to bone alone is very rare. We report a case of Hydatid cyst in bone parse. A 55 years old lady came with a complaint of pain over right hip since 1 year. Radiologically found to be having osteolytic lesion over proximal femur for which surgery was done and biopsy report showed hydatid cyst. The case is reported for its rarity.

Keywords: Hydatid cyst, Bone, Biopsy

INTRODUCTION

Hydatid disease is the most common infection in Central Asia, Middle East, East Africa caused by Echinococcus which is a cestode.[1] Hydatid disease is also called as Echiococcosis. Echinococcous is a zoonosis whose definitive host is carnivorous predator (dogs, fox). The adult tapeworm lives in small intestine and delivers eggs to be excreted with the stool. The intermediate hosts (sheeps, goats, cattle, pigs) are infected by ingesting eggs and humans can also be infected.[2,3] The egg hatches into larval stage in the digestive system of intermediate host and penetrates the intestine wall and gets lodged in lungs, liver, brain through blood stream However infection to bone alone is very rare. The incidence of bone hydatidosis is about 1-2.5%. Spine is the most commonly affected skeleton with 50% of all. Bone hydatidosis among humans and proximal femur is of 5 to 10%.

CASE REPORT

A 55 years old lady came with a complaint of pain over right hip since 1 year. Physical examination revealed no abnormal findings other than tenderness. Radiographs revealed an osteolytic lesion over neck extending into interotrochanteric region of femur (Figure 1). Computer tomography revealed a large lytic lesion in the head and neck of the right femur with well-defined margins, marginal sclerosis and narrow zone of transition. Clear internal matrix (Figure 2). Magnetic resonance imaging revealed well defined lesion measuring approximately 9.5 × 4.8 cm. The lesion is intramedullary in location. There is a suggestion of few septae seen within (Figure 3). No significant abnormality found on routine blood test.

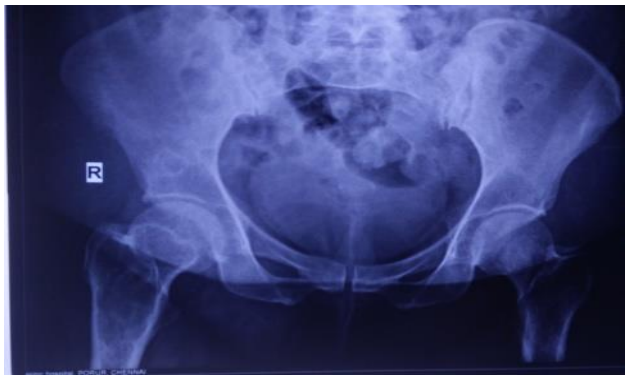

Figure 1: An osteolytic lesion over neck extending into interotrochanteric region of femur.

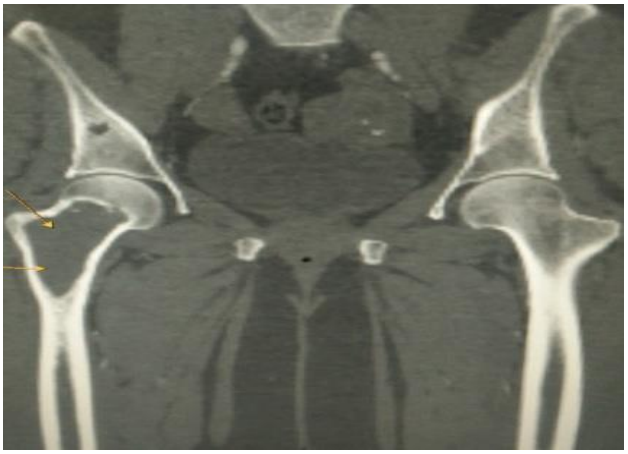

Figure 2: Computer tomography revealed a large lytic lesion in the head and neck of the right femur with well-defined margins marginal sclerosis and narrow zone of transition. Clear internal matrix.

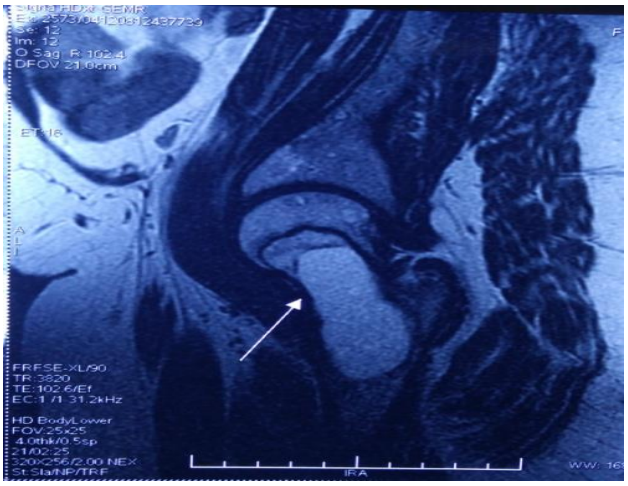

Figure 3: Magnetic resonance imaging revealed well defined lesion measuring approximately 9.5 × 4.8 cm. The lesion is intramedullary in location. There is a suggestion of few septae seen with in.

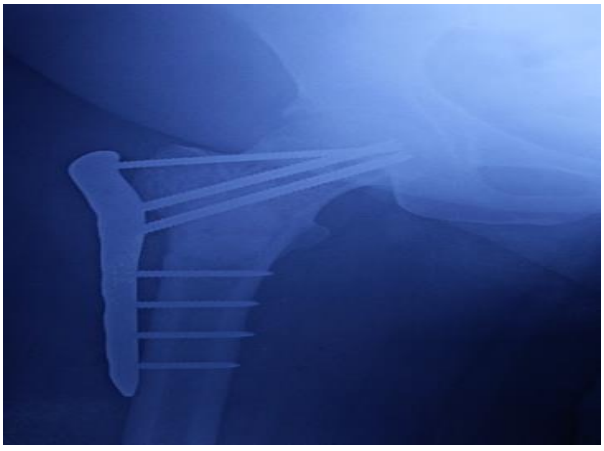

Figure 4: Curettage and fixation with Smith and Nephew locking compression plate and bone graft substitutes.

After surgical exploration proximal femur a window created over greater trochanter and curettage was done completely under C Arm guidance, the whole cavity is filled with bone graft substitutes and proximal femur is fixed with smith and nephew locking compression plate (Figure 4). Pathology result revealed Hydatid cyst over proximal femur. Microscopic revealed cystic lesion with fibrous septa. The septa shows a focal myxoid area with few blood vessels and the lumen of the cyst shows foci of hemorrhage (Figure 5a and 5b). Patient was started on oral albendazole (10 mg/kg/day) and continued for 12 weeks.

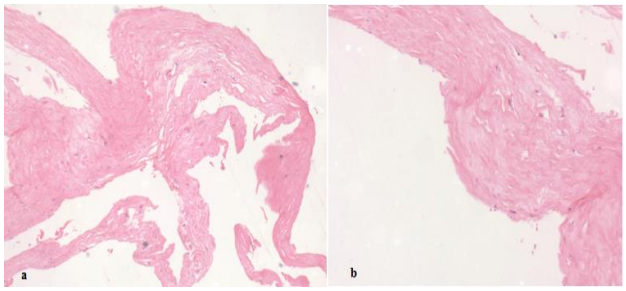

Figure 5a and 5b: Microscopic revealed cystic lesion with fibrous septa. The septa shows focal myxoid areas with few blood vessels and the lumen of the cyst shows foci of haemorrhage.

DISCUSSION

Thomas published a series of 28 cases of hydatid bone disease in the year 1884 gathered from isolated reports in the literature.[4] Spakas et al reviewed 8 hydatid cases at different anatomical locations and followed for a period of 4-16 years.[5] Ivanissevich was the one who reviewed about 47 cases and published completely about the disease.[6] The limited publications on hydatidosis signifies rarity of this condition.[7,8] Bone hydatidosis is a rare [9] because they must penetrate lung and liver and gets filtered to enter into arterial circulation.[10] Spine is the most common location and extra spinal location is very rare. It is asymptomatic for a long period and usually diagnosed in advanced stage.[9] Growth is slow because of the resistance of bone. The clinical manifestation of bone hydatid disease may take 10-20 years to become obvious.[11] The pre-operative diagnosis is difficult, usually determined only after biopsy because there are no specific diseases characteristic to distinguish it from the common cause of bone lesions.[11,12] Appropriate immune-diagnostic tests, such as the casoni interadermal test and Weinberg complement fixation test are helpful but they are of no value if no involvement of lung or liver.[11]

Many authors have advocated surgical curettage of the tumor and the cavity filled with bone graft substitute is the definitive treatment with or without chemotherapy using albendazole or mebendazole.[9,13,14] Incomplete removal of the tumor results in recurrences.[9,14] Pathological fractures, fistulation are the potential complications.[14,15]

CONCLUSION

Diagnosing Hydatid cyst disease of bone is very difficult. Surgery is the ideal treatment of choice for such lesions followed by oral albendazole for 12 weeks.

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