

Osseous Hydatid Disease: Mimicker of primary bone neoplasms.: Report of 2 cases

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Abstract

Osseous hydatid disease is rare, and it is even rare to see it in extremities or pelvis. At times these lesions present as destructive lesions on radiographs and mimic neoplasm. Here we present two such cases, one arising in the lower end of femur mimicking chondrosarcoma and required excision and surgical stabilization. Second case presented as a cystic lesion in iliac bone suggestive of aneurysmal bone cyst. Both are quite unusual presentation and hydatid disease should always be kept in differential while dealing with such lesion

Keywords: Osseous hydatid disease, chondrosarcoma, aneurysmal bone cyst

Introduction

Hydatid disease is still endemic in several parts of the world and is caused by the larval form of *E. granulosus* and *E. multilocularis*. Bone involvement is very rare with incidence of 0.2-4% of all cases. Spine is affected in nearly 50% of cases of osseous Hydatid disease. This condition is usually silent until a complication like paraplegia or pathological fracture occurs (1).

Aims and Objective

To report 2 cases of osseous Hydatid disease which mimicked primary bone neoplasia.

Materials and Methods

Retrospective data analysis was done to look for mimickers of primary bone tumors. We found 2 cases of Hydatid disease.

Case studies

Case 1:

65/Female presented with right thigh pain. Imaging showed a large lytic destructive lesion involving shaft of right femur with e/o calcifications [Fig. 1,23]. Possibility of chondrosarcoma was suggested. J needle biopsy revealed Hydatid disease of

bone [Fig. 4]. Patient was operated with excision of the femur segment and reconstruction with K-Nail-Long DF-LCP and cement spacer [Fig. 5]. The cut surface of the femur shows lytic lesion in the shaft filled with multiple soft white cysts [Fig 6]

Case 2:

35/Male presented with left hip pain. Imaging showed lytic cystic lesion involving left iliac bone. Possibility of Aneurysmal bone cyst was suggested based on X-ray and MRI findings [Fig 7]. J needle biopsy revealed hydatid disease of bone with chronic granulomatous reaction [Fig 8,9]. Patient is treated with medical management in view of multiple lesions.

Discussion

Hydatid disease is caused by the tapeworm *Echinococcus*. Species of the genus *Echinococcus* include *Echinococcus vogeli*, *Echinococcus granulosus* and *Echinococcus multilocularis*. In man and domestic animals, this parasitic infection is most commonly caused by the larval stage of *Echinococcus granulosus* (1). These cysts commonly occur in the lungs and liver, but can be found in any other organ or tissue

including bones, spleen, heart, eye, brain, and genitourinary tract (2). Bone involvement is very rare with incidence of 0.2-4% of all cases. Spine is affected in nearly 50% of cases of osseous Hydatid disease. Musculoskeletal lesions usually occur in isolation without concomitant hepatic lesions (1). Osseous Hydatid disease usually remains silent for long time unless complicated by pathological fracture or secondary infection. Hence, diagnosis is usually delayed (2). Radiological findings are usually of a lytic expansile lesion with erosion or occasionally break of the cortices and extension into soft tissues (In case of large lesions). These findings are not diagnostic of Hydatid disease (3). Common differentials include Fibrous dysplasia, ABC, primary bone malignancy and metastatic deposits (1). A definite pre-operative diagnosis without histological examination is often difficult as there are no pathognomonic signs, radiological findings may be confused with those of other tumoral lesions, and serological tests are of limited value. Diagnosis is often made intra-operatively. There are reports of attempt at incision and drainage mistaking these lesions as abscess (2). Pathological fracture is common in hydatid disease and often leads to non-union (4). Joint involvement is usually due to contiguous spread from the adjacent bone lesion (1). Osseous hydatidosis should be treated with radical resection with a wide margin of healthy tissue. This may be difficult sometimes especially in pelvic bones. Incomplete

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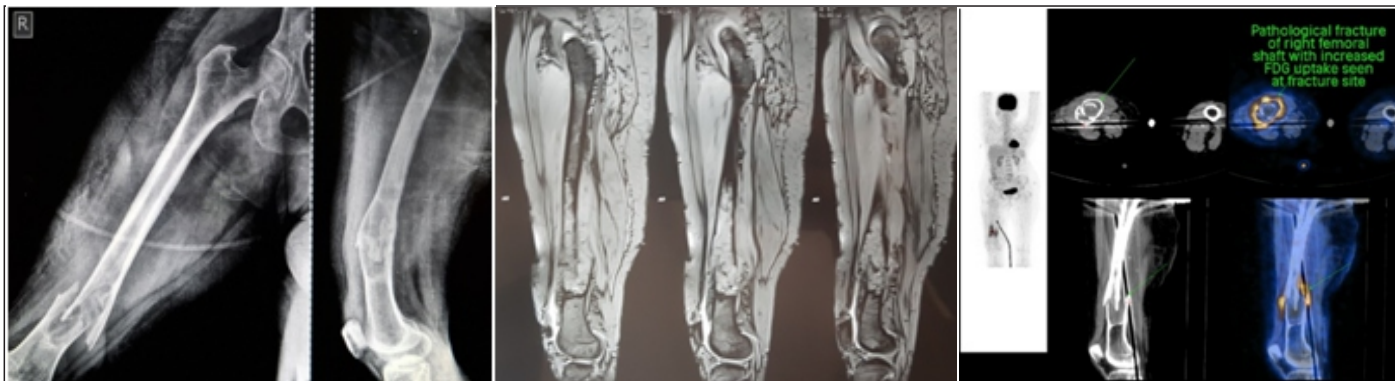


Figure 1: X-ray: Lytic lesion involving right femur shaft with e/o pathological fracture

Figure 2: MRI: Large lobulated as well as destructive lesion with pathological fracture.

Figure 3: PET scan: Solitary lesion in femur. No other metabolically active lesion elsewhere in body

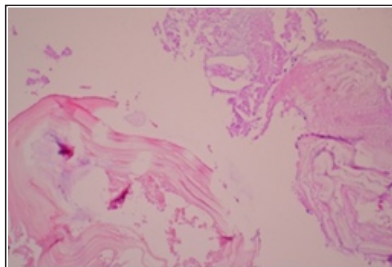


Figure 4: 20x, H&E: Lamellated chitinous hydatid cyst wall along with granular debris



Figure 5: Patient was operated with excision of the femur segment and reconstruction with K-Nail-Long DF-LCP and cement spacer

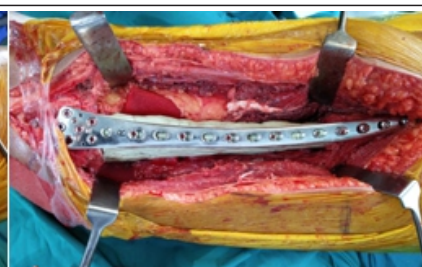


Figure 6: Cut surface of the femur shows lytic lesion in the shaft filled with multiple soft white cysts

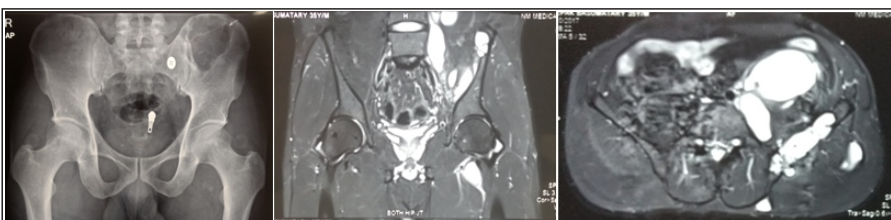


Figure 7: Imaging showed lytic cystic lesion involving left iliac bone. Possibility of Aneurysmal bone cyst was suggested based on X-ray and MRI findings

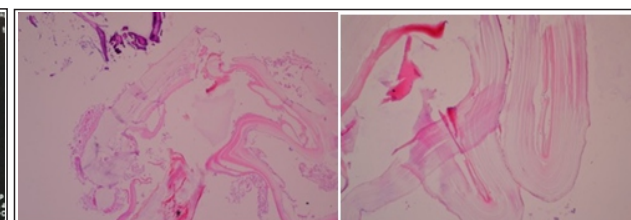


Figure 8: 10x and 40x, H&E: Bony fragments along with lamellated chitinous cyst wall.

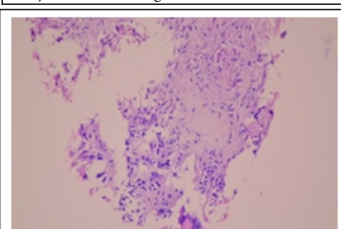


Figure 9: 20x: Prominent granulomatous reaction to hydatid fluid

resections lead to recurrences. This report emphasizes need to know this entity, keep it in the differentials of lytic expansile bone lesion to avoid delay in the diagnosis and prevent complications associated with it. A high index of suspicion is

necessary for the diagnosis, especially in patients that live in or travel to endemic areas. Knowledge of this entity is also necessary to avoid mislabeling these lesions as primary bone sarcomas.

References

1. International Journal of Research in Medical Sciences; Kumar R et al. Int J Res Med Sci. 2017 Mar;5(3):1126-1130.
2. M Laubscher et al SA Orthopedic Journal Winter 2018, Page 44-48.
3. Dahniya MH, Hanna RM, Ashebu S, Muhtaseb SA, el-Beltagi A, Badr S, et al. The imaging appearances of hydatid disease at some unusual

sites. Br J Radiol. 2001;74:283-9.

4. Mattern CJ, Gardner MJ, Grose A, Helfet DL. Echinococcus disease of the bone presenting as a femoral shaft non-union. ClinOrthopRelat Res. 2007;458:220-5.

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