

Discussion

The hydatid disease is common in liver (75%) and lungs (20%). The bony involvement is rare and accounts for less than 1% of the total lesions (Gide 1992)¹. Bony lesions are common in the vertebral column, pelvis, long bones and skull. Spine is involved in about 50% of the cases (Charles 1988)². The osseous lesions are primary and not extensions from the soft tissue. The joint involvement without a bony focus is exceedingly rare.

Intraosseous foci of echinococcus predominate in spongiosa and consist of minute, thin wall cysts. As cysts grow and expand, they produce cortical thinning, pathological fracture, and breaking of cortices results in soft tissue extensions. There is little periosteal reaction. The bone cysts lack the host adventitia layer as seen in other organs. The symptoms result from pressure exerted on adjacent structures by enlarging cyst. The patient complains of pain and swelling or may present with pathological fracture and spinal cord compression.

Radiologically there are radiolucent areas with expansion of bone, thinning of cortices and minimal periosteal reaction. These signs and soft tissue calcification appears to be highly suggestive of hydatid disease (Booz 1993)³. The normal bone architecture may disappear and calcification may be visible in the wall of the lesion (Ectacyst) indicating death of the parasite. The computed tomography (CT) demonstrates local extension of lesion in both bone and soft tissue very well (Torricelli et al 1990)⁴. The magnetic resonance imaging (MRI) also shows exact extent of the disease.

Apart from the imaging studies the diagnosis may be aided by the laboratory tests, namely; Eosinophilic count, Casoni test, Complement fixation test and Precipitation test.

Differential diagnosis includes fibrous dysplasia, giant cell tumor, chondrosarcoma, plasmacytoma and chondromyxoid fibroma.

Complications include pathological fractures, secondary infection, intraspinal rupture producing paraplegia and transarticular extension with osseous collapse and deformity.

The recommended treatment is combination of surgery and chemotherapy (Agarwal 1992)⁵. At surgery complete excision of intact cyst is not possible due to lack of adventitious layer, therefore thorough curettage and lavage with 33% saline is recommended. 1% formaline is also to be used. Bone grafting is performed to prevent pathological fractures. There is no published record of the use of acrylic bone cement as performed by us in case 1 on repeat surgery. The bone cement is used to fill the cavity after curettage for giant cell tumor of the bone. In addition to filling the gap, heat generated by the bone cement may be helpful in destroying larvae. Initially Mebandazol was used but due to its complication especially nephrotoxicity, Albendazol is preferred. Albendazol is used in doses of 10-20mg/kg BW/day for several weeks (Gideon 1992, Cancrini 1993)^{1,6}.

References:

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OSSEOUS HYDATID DISEASE

* GHULAMI MAHROOB, SAGHIR AHMED, ANISUD DIN BHATTI

Ossseous hydatid disease is caused by larval

stage of *Echinococcus granulosus* and is common

in sheep and cattle farming areas. The man is

accidental intermediate host. Common sites are

liver and lung. Bone involvement is rarely seen.

Bony lesion commonly presents at age of 30 to

60 years. Common sites are vertebral column,

pelvis, femur and skull. Joint involvement without

bony focus is exceedingly rare. Preoperative

diagnosis of bony lesion is very difficult, and

high index of suspicion along with plain radiography

and immunological test are major tools for diagnosis.

Computerized tomography (CT) and Magnetic

Resonance Imaging (MRI) are helpful in determining

the extent of bony and soft tissue lesions. The

treatment is combination of surgery and

chemotherapy. Recurrences are common. This report

presents case histories of two patients dealt at this

institute.

Key Words: Hydatid disease, Bone Cyst,

Ossseous Hydatid, Cyst and Pathological Fracture.

Case-1

Sixty years aged man from Balochistan

presented with pathological fracture of distal

1/3rd of femur in June 1988. Plain radiographs of

femur revealed comminuted fracture with osteolytic

lesion of distal 1/3rd of femur. Blood count was

normal. At surgery for internal fixation of fracture,

it was found that soft tissues and bone are full of

white flakes of variable sizes. Thorough curettage

and lavage with saline was done. The area was

also washed with 1% formalin. Fracture was

fixed with condylar plate and bone grafting was

done. Histopathology reported the lesion to be

Address all Communications to:

* Department of Orthopedic Surgery,

Jinnah Postgraduate Medical Center, Karachi.

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hydatid cyst.

In December 1992 the patient again presented

with dull ache and increasing swelling of the

distal thigh. The x-rays revealed healing of fracture

but there were multiple radiolucent areas. The

blood count was again normal. (In re-exploration

recurrence of the hydatid cyst was noted. Implant

was removed, curettage followed by lavage with

normal saline was performed. The osteolytic areas

were filled with acrylic bone cement. Postoperatively

Albendazol 10mg/kg BW/day was prescribed for

six months. At the latest followup the patient was

Case-2

In November 1988, a 26 years old pregnant

lady from Swat presented with painful swelling

of the left gluteal region for the past 6 years. The

swelling was 15cm by 20cm in size, was irregular

and had variable consistency. There was a 25

degree fixed flexion contracture of the left hip

joint. Regional lymph nodes were not enlarged.

The blood count was within normal limits. X-rays

revealed swelling involving the left iliac bone,

hip joint, ischial ramus and superior pubic ramus.

There was an outer rim of calcification with speckled

calcification through out the swelling.

Provisional diagnosis of osteochondroma with

sarcomatous changes was made. At surgery a

thick, creamy whitish material with small white

flakes was observed. Thorough curettage and lavage

with normal saline was performed. The area was

filled with 1% Formalin for 10 minutes.

Histopathology confirmed the diagnosis of hydatid

disease.