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CASE REPORT

Isolated hydatid cyst in right breast

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ABSTRACT

Hydatid disease, a parasitic infection caused by *Echinococcus granulosus*, occurs very rarely in the breast and can be challenging to differentiate from other breast lesions; most cases are diagnosed postoperatively. The current case is of a 25 years old female presenting with a non-tender and clinically benign lump in right breast at 12 O'clock position for one month in the supra-areolar region. Following ultrasound, a provisional diagnosis of hydatid cyst was made, subsequently confirmed by Fine Needle Aspiration Cytology (FNAC). Surgical excision and histopathological examination confirmed the initial diagnosis. There were no peri-operative complications. The patient was prescribed Albendazole for 3 months and at last follow up showed no signs of recurrence.

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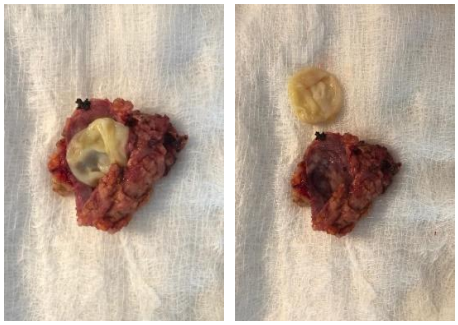
INTRODUCTION

Hydatid disease is a parasitic infection commonly caused by the larval form of *Echinococcus granulosus*. It is endemic in some sheep-raising countries. The frequent sites are the liver (75%) and lungs (15%), with only 10% occurring in other parts of the body. Hydatid cyst of breast is very unusual and usually not included in the differential diagnosis of breast lumps. Initially, patient presents with only a palpable and painless lump in breast. It is very challenging to differentiate it from other tumoral lesions of breast. Very few cases of hydatid cysts of the breast have been reported in medical literature and majority of the reported cases have been diagnosed postoperatively. The present case of isolated hydatid cyst of right breast was diagnosed preoperatively by FNAC and treated surgically by excision with no complications.

CASE PRESENTATION

A 25 years old female presented with a lump in right breast at 12 O'clock position in the supra areolar region, present for 1 month. On clinical examination, it was non-tender and clinically benign; the contralateral breast was normal. Ultrasound (U/S) breast showed a 3.4 x 2.9 cm retro-areolar simple cyst in right breast and a few sub cm right axillary lymph nodes. Routine laboratory investigations and abdominal ultrasound were normal. FNAC was performed for further evaluation of the cyst and fluid was sent for cytology which was consistent with Echinococcal (hydatid) cyst. Repeat ultrasound showed residual retro-areolar cyst with internal echogenic debris. The patient then underwent excisional surgery and had an uneventful recovery. The histopathological report of excisional cyst later on confirmed the diagnosis. The patient was prescribed Albendazole for three months. At her last follow up, she had no signs of recurrence.



(a) **(b)**

Figure 1 (a & b): Photographs of excised breast hydatid. Whitish hydatid cyst seen separately in (b).

DISCUSSION

The location of hydatid cyst at the time of diagnosis is mostly in the liver (75%) and lungs (15%), with only 10% occurring in other parts of the body. In the breast it only accounts for 0.27% of all cases. Hydatid disease of the breast is extremely rare even in endemic areas; it can be the only primary site or part of disseminated hydatidosis. Patients usually present with a palpable and painless lump in the breast. Differentiation of lesion from other tumors can be challenging. Only few reports are published, and majority of the reported cases have been diagnosed postoperatively. In our case, the patient had a non-tender right breast lump for 1 month and was diagnosed preoperatively by FNAC.

Hydatid disease is a parasitic infection caused by larval stage of cestode Echinococcus but most commonly by larva tapeworm *Echinococcus granulosus*. It belongs to the family Taeniidae. The disease has two stages, the larval stage (metacestode) and the adult stage (taenia). The life cycle of the parasite involves the carnivores (dogs and wild canine) as definitive hosts and the humans as the accidental intermediate host (dead end) and animals (herbivores & omnivores) as both intermediate and definitive hosts.[1]

About 75% of hydatid cysts are found in liver, 15% in lungs, and 10% involving other parts of the body. Involvement of breast is very infrequent even in endemic areas. It has only been reported in 0.27% of cases. The presenting features of hydatid cyst of breast are as a palpable and non-tender breast lump breast which increases in size over time with no involvement of regional lymph nodes. The other differentials include fibroadenoma, phyllodes tumors, chronic abscesses, or even carcinoma. So, it can be very challenging to differentiate it from other breast lesions. Only a few published reports are available in literature; most of these cases are diagnosed postoperatively.[2-5] Therefore, in diagnosing a breast lump, hydatid cyst should always be included in the differentials in the endemic areas.[6]

The screening modalities for diagnosis of breast hydatid disease are mammography, ultrasound, and MRI. On mammography, it may appear as a circumscribed mass with characteristic internal ring-shaped structures (in over penetrated view) which strongly suggests breast hydatid cyst.[7] U/S and MRI also have a significant diagnostic role. They give added information about the internal characteristics and structure of hydatid cysts. Serologic tests like hemagglutination tests can also be helpful in diagnosis.[8] Radiologic and serologic methods are not definitive, however could aid in the diagnosis of breast hydatid cyst.[9]

FNAC can be done for pre-operative diagnosis. Scoleces, hooklets or laminated membrane can be identified in FNAC.[10] It is a safe procedure with no associated complications.[9] The treatment of hydatid cyst of breast is complete excision without any spillage. The recurrence rate is very low and has been reported only in 10% of patients postoperatively. The recurrence rate of hydatid cyst may be decreased with the use of albendazole post-operatively.[12]

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