



## CASE REPORT ON HYDATID CYST OF BREAST

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**ABSTRACT** Hydatid cyst is common in developing countries. It is caused by echinococcus species; can arise in any part of the body. Breast involvement with HD is extremely rare and accounts for 0.27% of all occurrence; it can be isolated or secondary to disseminated hydatidosis. Performance of preoperative cytological examination is not necessary for all patients. Complete excision should be the first-line option for breast HD. Here we discuss a rare case report on hydatid cyst of breast presenting in a 21 years old female and discussion on its management.

**KEYWORDS :****Introduction:**

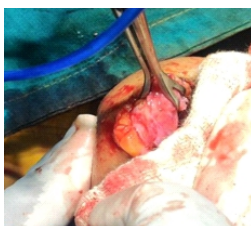
Hydatid disease is caused by the larval stage of small zoonotic tapeworm, *Echinococcus Granulosus* primarily found in dogs. Once it was a serious problem in sheep rearing countries. Hydatid disease (HD) is an endemic disease that particularly affects people living in rural areas in close contact with cattle, however, due to immigration and travel, their presence in nonendemic areas is possible. The hydatid cyst can be seen any part of the body. Roughly 70% of hydatid cyst are detected in liver, 20% in lungs and 10% in other organs. Breast involvement occurs in 0.27% of all HDs. Breast HD may be isolated, or it may be a part of disseminated hydatidosis. The diagnosis is often delayed because there are no specific signs and mimic other diseases; usually it is not included in the differential diagnosis of mammary tumors because of their rarity. Routine breast imaging modalities can be used in the diagnosis of breast HD. Serologic tests for HD can be useful in cases suspected for HD. Algorithm of breast HD management is based on the treatment for liver HD. Preoperative diagnosis can be made with clinical data, imaging and findings in FNA; although few reports published in most reported cases have been diagnosed after surgical removal. The aim of this case report is to discuss the necessity of cytological evaluation of cyst content and range of available surgical procedures.

**Case presentation:**

A 21 years old female presented with painless lump of right breast since last 6 months. There was no nipple discharge or fever. No history of trauma or any significant family history. There was no significant past history. On physical examination, mass of size 3cm X 2cm is palpated in lower and inner quadrant of right breast which was painless, freely movable and well defined margins. The nipple, areola, and overlying skin were normal and no palpable lymph node in both axilla. Routine laboratory tests were in normal ranges.

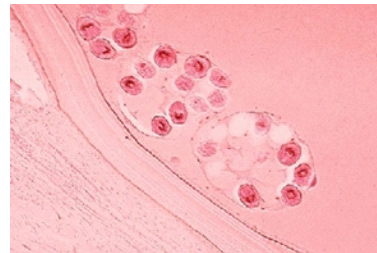
On USG, there was evidence of a giant, well-circumscribed cystic mass with multiple hyperechoic band-like structures measuring 3 X 2 X 1.5 cms, which was suspected to be associated with the occurrence of a hydatid cyst.

FNAC of the lump revealed fragments of laminated membrane with parallel striations, dispersed retractile hooklets, granular debris and isolated multinucleated giant cells. The diagnosis was consistent with a hydatid cyst.



**Figure 1: Intra-operative picture of hydatid cyst of breast.**

Surgical excision of lump was done. Grossly, the mass was 3cm in diameter, cystic, with fibrofatty tissue attached. On cut section, the cyst was unilocular, with whitish translucent wall and contained clear fluid, no evidence of haemorrhage.



**Figure 2: Histopathological picture.**

Microscopic examination revealed a cyst comprised of outer laminated membranes with germinal layers of hydatid cyst and scolices; surrounding breast parenchyma is unremarkable with focal lymphocytic infiltration in the stroma.

**Discussion:**

The liver and lung are the most frequently involved in parasitic infections, and systemic dissemination is source of breast involvement. Echinococcosis is caused by following tapeworms (1) *Echinococcus granulosus*, (2) *Echinococcus multilocularis* and (3) *Echinococcus oligarthrus*. Among these *E. granulosus* is the commonest cause of hydatid disease throughout the world, particularly common in sheep and cattle rearing countries. The primary host is the dog which passes gravid proglottides in the faeces, which on rupture release eggs that are subsequently swallowed by the intermediate hosts; human being is one of them, also known as accidental host. Echinococcosis is difficult to diagnose clinically because the cyst remains isolated in various organs. Eggs ingested by intermediate hosts like cows, sheep, and humans, liberate an embryo in the duodenum, which penetrates intestinal mucosa and enters the portal circulation. The liver acts as a first filter and stops about 75%, while lungs, the second filter, stop about 10% and only 15% embryos are free to develop cysts in other organs of the body. According to Barret and Thomas, 60% of the cysts are found in the liver, 30% in lungs, 2.5% in kidneys, 2.5% in heart and pericardium, 2% in bone, 1.5% in spleen, 1% in muscle, and 0.5% in brain. The embryo usually develops into a unilocular cyst. Hydatid disease of breast is rare and accounts for only 0.27% of all cases. It generally affects women between 30 and 50 years of age. It might mimic fibroadenoma, phyllodes tumors, chronic abscesses, or even carcinoma. So breast hydatid cyst should be included in differential diagnosis of breast lumps especially in endemic areas. Preoperative diagnosis can be made by fine needle aspiration cytology where scoleces, hooklets or laminated membrane can be identified. It is a safe procedure, as no complications were mentioned in the literature. The disease can be diagnosed by radiologic or serologic means, both of which are not definitive.

There are a variety of methods for treatment. Appropriate surgical treatment of hydatid cysts depends on the location. Breast HD can be detected at diameters smaller than HD of other body parts since most women are sensitive to breast masses, and there are screening programs in many countries. We recommend complete excision especially for small breast hydatid cysts if there is no cosmetic and medical contraindication.

#### Conclusion:

Hydatid cyst in unusual sites can create a diagnostic dilemma. Breast is an unusual site for hydatid cyst to occur. In epidemic areas, it should be considered among differential diagnosis while evaluating breast lumps. As the cysts grow slowly, they are usually confused with cystic lesions due to mammary fibrocystic changes or benign breast masses. When ring-shaped structures are not present, the mammographic findings are not specific. Sonographic features are variable and usually non-specific, and the definitive diagnosis should be confirmed by pathological study.

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