

# ISOLATED HYDATID CYST OF BREAST: A CASE REPORT

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## ABSTRACT

Hydatid disease involving the breast is very infrequent. The breast can be either a primary site of the disease or part of a disseminated hydatidosis. This disease should be included in the differential diagnosis of breast lumps especially in endemic areas. Pre-operative diagnosis can be made by fine needle aspiration cytology. The breast hydatid disease also can be diagnosed by radiological or serologic means but neither of them is definitive. Surgery is the treatment of choice. We report a case of isolated hydatid cyst of breast in a 40-year-old woman, from Afghanistan, who presented to our field hospital with a right breast painless lump of one year duration, which was diagnosed incidentally during surgery from its gross appearance which mimics that of a liver hydatid cyst, normally common in this endemic area.

**Key words:** Hydatid disease, Breast lump, Afghanistan, Field hospital.

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## Introduction

Hydatid disease is caused by tapeworm *Echinococcus Granulosus*. It is widely prevalent in cattle breeding countries<sup>(1)</sup>. The liver is the most common site to be affected (70%), while lungs are the second sites (20%)<sup>(1,2)</sup>. The breast is a rare primary site of hydatid disease and accounts for only 0.27% of cases<sup>(2)</sup>.

## Case report

In August 2003, at our surgical clinic at the Jordanian Field Hospital in Mazar Sharif, a 40 year-old woman presented with a right breast painless lump of one-year duration, which was gradually increasing in size. Physical examination showed 6cm × 8cm mass in the upper lateral quadrant of the right breast, firm, not tender, immobile, and adherent to underlying tissue, with normal overlying skin and nipple. There was no palpable lymph node in the right axilla. The left breast and axilla were normal and systemic examination did not show abnormality. Investigations showed normal complete blood count, chemistry, chest x-ray, and abdominal ultrasound. The breast ultrasound showed a 7cm x 6cm x 6cm simple cystic lesion in the right breast. Fine needle aspiration cytology and mammogram were not available in our field hospital. The patient was

scheduled for surgery, and through circumareolar incision the tissues around the cyst were dissected. A characteristic rubbery whitish cyst as that of hydatid disease was identified. Aspiration of cyst contents was done and replaced by similar amount of hypertonic saline. This was left for ten minutes to ensure that all parasites were killed. The cyst, then was opened and endocyst was removed completely (Fig. 1).



**Fig. 1.** Shows endocyst after removal of the cyst

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A drain was inserted at the site of the excised cyst. The postoperative period was smooth and the patient was discharged after three days.

## Discussion

Hydatid disease is a parasitic infection caused by several species of Cestode *Echinococcus*. The adult *E-Granulosus* is a worm, when infected it produces eggs that are passed in stool. 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<sup>(3,4)</sup>. 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<sup>(5)</sup>. 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<sup>(5,6)</sup>. The embryo usually develops into a unilocular cyst<sup>(7)</sup>. Hydatid disease of breast is rare and accounts for only 0.27% of all cases. The breast can be a primary site or part of a disseminated hydatidosis<sup>(2,8)</sup>. Typically, the patient presents with painless breast lump, which increases slowly in size without regional lymph node involvement. It generally affects women between 30-50 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<sup>(2,5,8)</sup>. Preoperative diagnosis can be made by fine needle aspiration cytology where scoleces, hooklets or laminated membrane can be identified<sup>(9)</sup>. It is a safe procedure, as no complications were mentioned in the literature<sup>(2,5,10)</sup>. The disease can be diagnosed by radiologic or serologic means, both of which are not definitive<sup>(10)</sup>. Mammogram may show a circumscribed mass, the characteristic ring shaped structures inside the mass in over penetrated view strongly suggests breast hydatid cyst<sup>(11)</sup>. The ultrasound and Magnetic Resonance Imaging are helpful diagnostic tools<sup>(5,12)</sup>. Serology tests

such as intradermal and indirect hemagglutination tests may be used to confirm the diagnosis.

## Conclusion

Hydatid cyst should be considered in the differential diagnosis of breast lumps especially for those living in endemic areas.

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