

**CASE REPORT****A RARE CASE OF HYDATID CYST DISEASE OF THE BREAST: A CASE REPORT AND REVIEW OF LITERATURE**Abebe Bekele, MD<sup>1</sup>, Addisu Firew, MD<sup>2</sup>**ABSTRACT**

*Hydatid cyst of the breast is extremely rare even in endemic areas and it only accounts for 0.27% of all hydatid cyst disease cases. It can either be a primary site or part of a disseminated hydatidosis. Surgery remains to be a treatment of choice. Only few reports are published in the literatures and most of the reported cases have been diagnosed postoperatively as it is not easy to reach at a definitive diagnosis with clinical examination and radiological investigations only.*

*This is a case of an isolated hydatid cyst of breast in an 18-year old woman from the Amhara region, Ethiopia. She presented with left breast painless lump of 5 years duration and a correct pre-operative diagnosis was made by fine needle aspiration cytology, then confirmed after surgery. We believe this disease should be included in the differential diagnosis of benign breast lumps especially in endemic areas.*

**Keywords:** *Hydatid cyst, breast,, Ethiopia*

**INTRODUCTION**

Hydatid disease is a parasitic infection caused by the larval form of *Echinococcus* and seen endemically among sheep-raising communities. (1,2) The incidence of the parasite differs from country to country: it is higher in the sheep-raising, developing and underdeveloped countries around the Mediterranean Sea, the Middle East, South America, Asia & East Africa. Insufficient hygienic conditions promote the spread of the disease. Although all the sites of the body can be possible location of the parasite, breast is an example of rare location.

Very few cases of hydatid cysts of the breast have been reported in the literature even in endemic areas; it only accounts for 0.27% of all cases. Patients usually present with a palpable and painless lump in the breast, hence it is challenging to differentiate it from other tumors. Only few reports have been published and majority of the reported cases have been diagnosed postoperatively. (1-7) This is a report of such a rare primary location of hydatid disease in the breast.

**CASE REPORT**

An 18-years old woman presented with a left breast painless swelling of 5 years duration, which was gradually increasing in size. She reported no nipple

discharge and no skin changes. She had no recollection of any history of trauma but had close contact with domestic animals including sheep and cows. Physical examination was notable for a 6 by 6 cm mass in the upper outer quadrant of left breast which was firm, rounded, non-tender and mobile. The overlying skin and the nipple were normal and there were no palpable axillary lymph node. Right breast, right axilla and the rest of the examination was non-significant.

Laboratory and imaging investigations revealed normal complete blood count, blood chemistry, chest x-ray, and abdominal ultrasound. Breast ultrasound showed a 6x4 cm well defined cystic mass on the left upper outer quadrant with a double wall shadow. Fine needle aspiration cytology was strongly suggestive of a hydatid cyst.

With an impression of hydatid cyst disease, the patient was prepared and operated under local anesthesia. A curvilinear incision breast incision was made and an intact cyst was removed. (Figure 1) Sectioning of the cyst revealed a typical hydatid cyst containing turbid hydatid fluid. Biopsy confirmed the diagnosis. (Figure 2& 3) The patient was discharged with Albendazole 400mg twice-daily tablets and over three months follow up, she had no evidence of recurrence.

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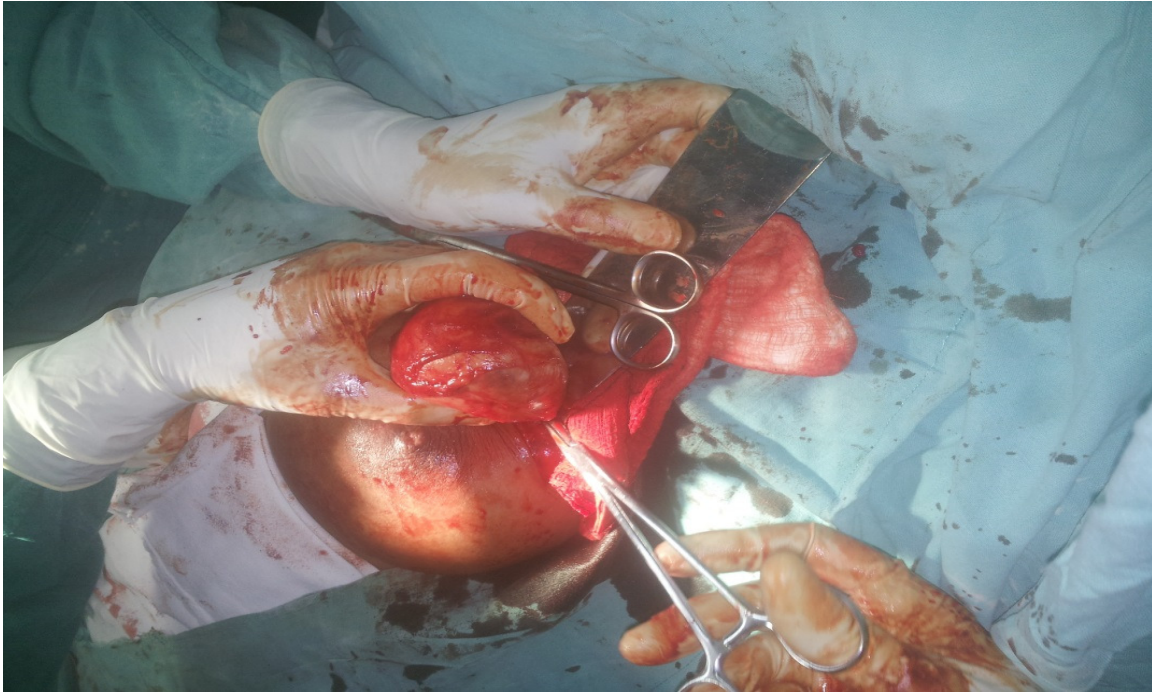


Figure 1: An intact hydatid cyst excided totally

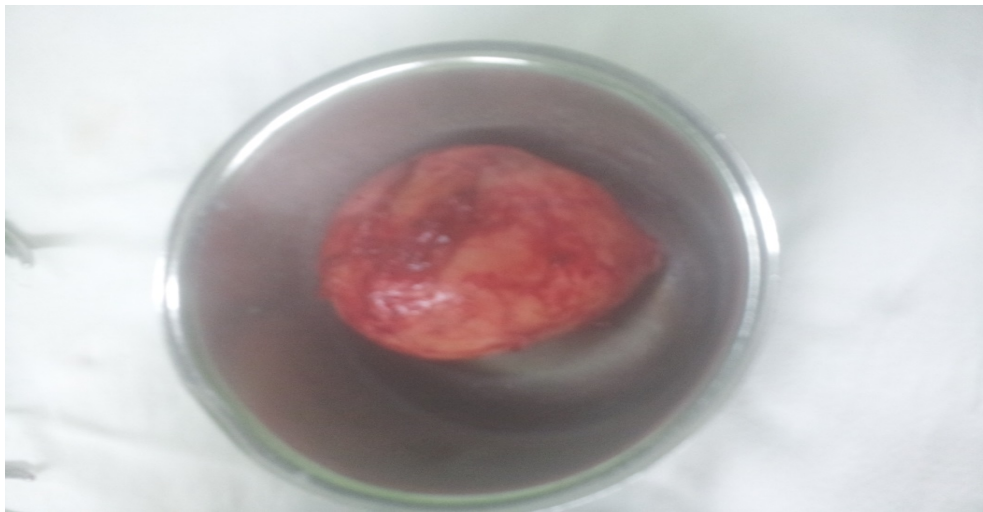


Figure 2: Post operative specimen



Figure 3: Sectioned cyst showing endocyst and turbid hydatid fluid

## DISCUSSION

Hydatid disease is a cyclo-zoonosis caused by larval tape-worm of the genus *Echinococcus*, *E. Granulosus*, *E. Multilocularis* & *E. Oligarthrus*. *E. Granulosus* is the most common cause of hydatid disease worldwide especially common in sheep & cattle raising countries. (1-3) The primary hosts are dog which pass the gravid proglottids in their feces, which on rupture release eggs that are subsequently swallowed by the intermediate hosts: i.e cows and sheep. Human are accidental hosts. In the duodenum, an embryo is released which penetrates the intestinal mucosa and enters the portal circulation. The liver acts as a first filter and arrests about 75% of the contents, hence making liver hydatid cyst disease the most common disease form. The lungs trap and additional 10% of embryos hence only 15% of 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. (1-4)

Hydatid disease of breast is rare and accounts for only 0.27% of all cases. (4,5) The breast can be a primary site or part of a disseminated hydatidosis. Typically, the patient presents with painless breast lump, which increases slowly in size without regional lymph node involvement. Even though such cysts have been reported from women aged 20 to 74 years, it generally affects women between 30 and 50 years of age. (2,5,7) It may mimic fibroadenoma, phyllodes tumors, chronic abscesses, or even carci-

noma. (1-7) Preoperative diagnosis can be made by fine needle aspiration cytology where scolices, hooklets or laminated membranes can be identified. It is a safe procedure, as no complications were mentioned in the literature. (4,5,6,8) Serologic tests may be used to confirm the diagnosis and in follow up but a positive serum reaction may occur even in absence of liver and lung involvement. (6)

The disease can also be diagnosed by ultrasound, mammography, ultrasound, and magnetic resonance imaging (MRI). However, for classification of the cysts, ultrasound is considered the best choice. (7,8) Mammography shows a non-specific, homogeneous, smooth, circumscribed lesion. The ultrasound findings vary according to the degree of maturation and the complications. Hydatid sand composed of hooklets, membranes, and debris give internal echo, and the level of fluid can be seen. The presence of a thicker and more laminated wall, relative to a simple cyst, and a thin calcification layer within the lesion on ultra-sonography favors hydatid cyst. (1-4)

A hydatid cyst is usually not included in the differential diagnosis of breast lumps due to its rarity, even in endemic areas. In addition, again due to its rarity, the above-mentioned radiographic appearances of breast hydatid disease are frequently missed until an operative diagnosis is made. Rarely, a preoperative diagnosis can be made using a combination of clinical, imaging and fine needle aspiration cytology (FNAC) findings (7,8) A hydatid cyst is treated with total excision without any spillage and its recurrence is very not common. rare. However, a three months course

of Albendazole treatment has been shown to reduce the incidence of recurrence. (1-4)

In conclusion, hydatid disease of the breast is extremely rare disease and is very challenging to differentiate it from other lesions of the breast. However, the treating physician should keep this diagnosis in mind as a differential diagnosis, especially in patients coming from endemic areas.

The diagnosis usually made is postoperatively. However, ultrasound and FNAC are safe and effective preoperative diagnostic tools. Recurrence after a complete surgical excision is the not common.

## REFERENCES

1. Saeed M, Jarbou, Wasfi M, Salaita, Mohammad A, Khasawneh. Isolated hydatid cyst of breast: a case report. JRMS. 2007; 14(1): 64- 65. PubMed | Google Scholar
2. Farrokh D, Hashemi JB, Zandi B. Primary hydatid cyst of the breast : A case report. Iran J Radiol. 2007;4 (3):159-162. PubMed | Google Scholar
3. GUNAY K., MUSLUMANOGLU M., TAVILOGLU K., ROZANES L.,ILHAN R., SEVEN R. Hydatid cyst of the breast. A very rare form of hydatid disease. Breast Dis, 1996, 9 : 295-8.
4. VASENWALA S. M. Echinococcosis involving the breast : diagnosis by fine needle aspiration cytology. Indian J PatholMicrobiol, 1996, 39 : 155-6
5. Farrokh D. Hydatid cysts of the breast: A report of three cases. Irn J Med Sci 2000;25(1 &2): 72-75
6. SaginHB, Kiroglu Y, Aksoy F. Hydatid cyst of the breast diagnosed by fine needle aspiration biopsy. A case report Actacytol 1994;38(6): 965-7.
7. Ali A, Aldhilan A, Makanjuola D, Abdulmohsen A. Preoperative diagnosis of hydatid cyst of the breast: a case report. Pan Afr Med J 2013;14:99.
8. Khatib I, Kharouf T, Khrais M, Khasawneh A. Primary hydatid cyst of the breast: report of two cases. Jordan Med J 2003;37(2):192–4.