

# Breast hydatid cyst: An unusual breast lump

## Memede hidatik kist: Nadir bir meme kitlesi

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### Abstract

Cystic hydatid disease is caused by the parasite *Echinococcus granulosus*. Hydatid disease is endemic in countries where raising sheep and cattle constitutes an important means of livelihood. The most commonly affected organs are the liver and lungs. Involvement of the breast is very rare. A case of isolated hydatid cyst of the breast is presented.

**Keywords:** Breast, lump, hydatid, cyst, unusual

### Öz

Hidatik kist hastalığına *Echinococcus granulosus* paraziti sebep olur. Hidatik hastalık, geçimin önemli bir aracını koyun ve sığırları yetiştirmenin oluşturduğu ülkelerde endemiktir. En sıklıkla etkilenen organlar, karaciğer ve akciğerlerdir. Memelerin tutulumu çok nadirdir. Sadece memede hidatik kisti bulunan bir olgu sunuldu.

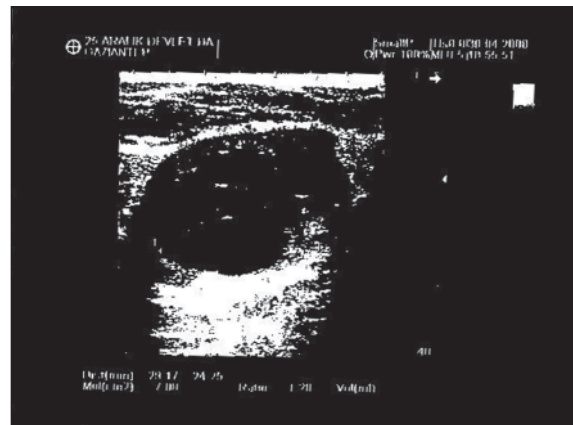
**Anahtar kelimeler:** Meme, kitle, hidatik, kist, nadir

### Introduction

The breast is a very rare site of infestation. Cystic hydatid may present within the breast as a well-circumscribed lesion, and the differential diagnoses include a simple cyst, fibroadenoma, phyllodes tumour or even, rarely, intracystic carcinoma (1). Differential diagnosis should note a well-circumscribed breast mass, which is important so as to avoid complications and morbidity associated with an undiagnosed disease.

### Case Report

A 31-year-old Turkish woman presented to the surgery clinic with a lump in her left breast that she had realised for the previous three months. She had undergone surgery for liver hydatid disease 3 years ago. On examination, there was a palpable lumpy area in the lower half of the areolar area of the left breast at the 5-6 o'clock position. Ultrasonography showed a well-defined lesion at the 7 o'clock position, next to the areolar area of the left breast, extending from the 5-7 o'clock position. The lesion was cystic with thick echogenic debris; there was a capsule around the cyst, and septa were observed in the cyst. The lesion measured 3 cm × 2.5 cm (Figure 1). The lesion was hypodense nodular with wall structure evident, and had the density of liquid (Figure 2). The lesion



**Figure 1.** Ultrasonographic image of the hydatid cyst of the left breast.

was nodular, like a benign type, and was BI-RADS category 3 (Figure 3). The appearance was benign in the MRI (Figure 4). Indirect hemagglutination test was positive (1/640 titer). Therefore, the diagnosis of breast hydatid cyst was made. The liver, lung, and brain showed normal imaging characteristics. A total excision was performed in the operating theatre under local anaesthesia. The histopathology report confirmed the diagnosis and noted features that were compatible with a hydatid cyst (Figure 5) (HE X 40).

The patient underwent a breast ultrasonography at two and seven-years follow-up, which was reported to be normal. She was disease-free for seven years after the initial treatment.

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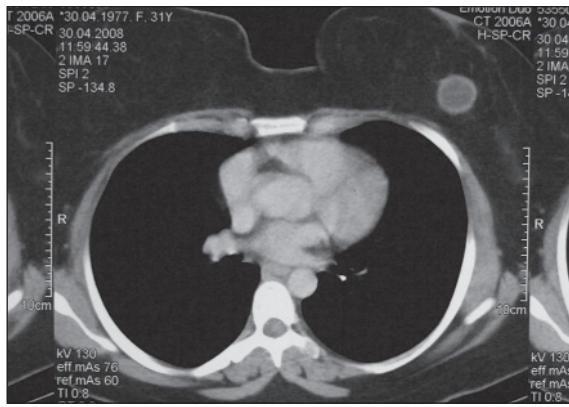
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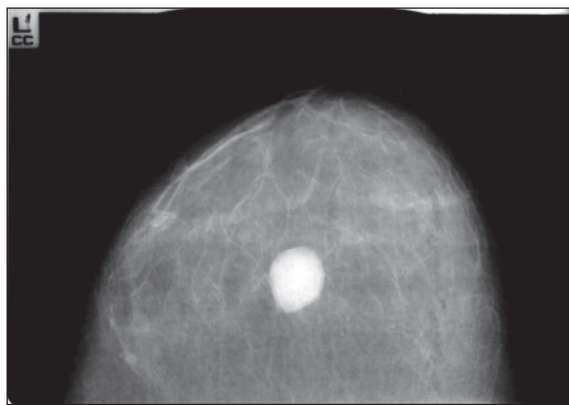
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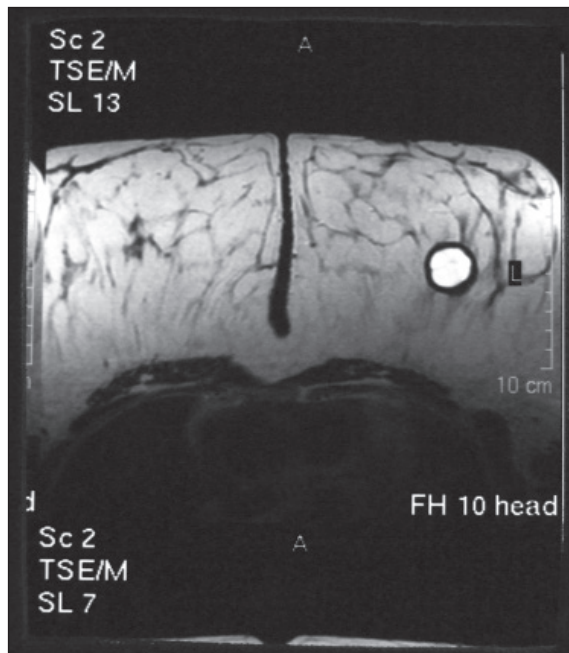




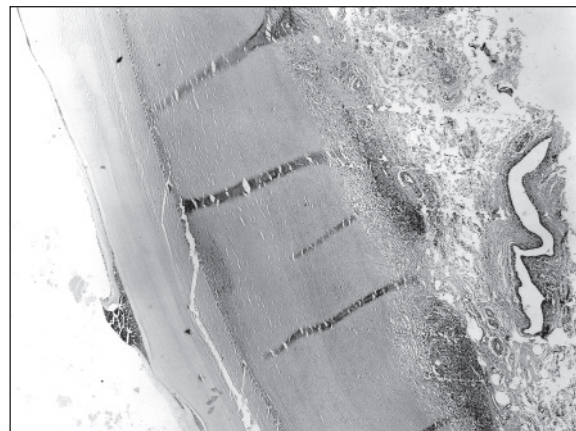
**Figure 2.** Computerized tomographic image of the hydatid cyst of the left breast.



**Figure 3.** Mammographic appearance of sharply defined radiopaque lesion.



**Figure 4.** Magnetic resonans image of the hydatid cyst of the left breast.



**Figure 5.** Microscopic appearance of the lesion. The microphotograph reveals a fibrous capsule, cuticular membrane of hydatid cyst.

**Discussion**

Hydatid disease is an endemic illness in many parts of the world and a major public health concern. It can occur almost anywhere in the body and demonstrate a variety of imaging features. The breast can be a part of the disseminated disease or may be the only primary site, which is very rare, with a reported incidence of only 0.27%(2). Hydatid cysts of the breast are rarely a part of large patient series of systemic hydatid disease (3). In this case, there was no hydatid disease in the body viscera beyond the left breast localization. The patient had been operated on for hydatid cyst of the liver three years ago. Breast hydatid mostly occurs in women aged 30-50 years; in our case, the patient was 31 years of age (4). Typically, the patient presents with a breast lump, as in our case. The differential diagnoses include cyst, fibroadenoma, phyllodes tumours, and rarely, circumscribed carcinomas. Due to the rarity of this condition, correct diagnosis might be missed only on ultrason. In our case, the patient was subjected to a breast ultrason. The results showed a breast cyst with suspicion of hydatid disease. In this case, various imaging modalities were used for differential diagnosis of the left breast cyst. Therefore, the use of mammography, CT and MR may also provide novel methods for diagnosing hydatid disease of the breast.

We also examined other localizations (liver, lung, and brain) for hydatid disease preoperatively. We did not identify any pathological imaging characteristics for hydatid disease in these organs. Treatment should be provided for symptomatic diseases, and even for asymptomatic cysts, because recurrence is related to significant problems in this disease. Surgery is also appropriate for large cysts as well as those that are superficial and likely to rupture. It must also be operated to differentiate from the cancer. Surgery is also required in order to differentiate the cyst from cancer.

Total excision of the cyst is the preferred treatment method and has been universally found to be curative (5,6). In this case, the breast cyst was also totally excised. In conclusion, although breast hydatidosis is rare, it should be considered as a differential diagnosis of breast lumps presenting in endemic areas. In the breast, it may mimic a simple cyst, fibroadenoma, chronic abscess, phyllodes tumour, or even cancer. Radiologists and surgeons should both be aware of this rare but potentially serious breast disease. Radiological imaging findings can generally help to establish the diagnosis, but the occurrence of hydatid disease at an atypical location with unusual imaging findings may make the differential diagnosis difficult. All forms of modern imaging technologies should be used for the differential diagnosis of breast hydatid cyst in order to correctly identify the appropriate treatment modality. Resection of the cyst with imaging features of the hydatid disease of the breast is also important to confirm the diagnosis, and thereby, complete the treatment.

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