



Mammary Hydatid Cyst as an Unusual Cause of a Breast Lump: A Case Report

Waleed M. A. Gilan^{1,*}

¹Department of General Surgery, Faculty of Medicine and Health Sciences, Sana'a University, Sana'a, Yemen

ABSTRACT

Hydatid cyst disease is caused by the larval stages of *Echinococcus granulosus*, where hydatid cysts predominantly affect the liver and lungs but are very rarely encountered in the breasts. This report is the first to present an unusual mammary hydatid cyst in the left breast of a 45-year-old woman from Yemen. The patient complained of a painless mass in the left breast for one year. Imaging revealed a mobile lesion with smooth margins. After the removal of the whole mass, diagnosis of the hydatid cysts was confirmed by histopathology. The patient was treated with albendazole for a month, and no recurrence was observed during follow-up visits. Therefore, this type of cysts should be considered by radiologists and surgeons in the differential diagnosis of breast lumps in areas endemic for the disease.

Keywords: Hydatid cyst, Breast, Yemen

*Corresponding author: W. M. A. Gilan (Waleedgilan112@yahoo.com)



1. Case Presentation

A 45-year-old woman presented to Kuwait University Hospital of Sana'a University with a lump in the upper outer quadrant of the left breast for one year. She showed no risk factors for breast cancer or other complaints. She was living in a rural area, and her occupation was associated with livestock rearing. Physical examination revealed a firm, mobile mass, measuring 5.5 cm in diameter and with smooth borders. However, she had no axillary lymphadenopathy. Other physical examination findings were normal. Ultrasonography of the breast revealed a cystic lesion in the upper outer quadrant of the left breast, measuring 5×4cm, being divided by thin septa and primarily mimicking a semisolid tumor in character. A clinical decision was then made to excise the lump surgically. Surgery revealed a mass surrounded by a dense fibrous tissue (Figure 1). Figure (2) shows the completely excised lump. Sectioning of the mass revealed a laminated membrane and the presence of daughter cysts inside it (Figures 3 & 4), which grossly identified it as a hydatid cyst. In addition, the cystic mass contained a yellowish, thick fluid (Figure 1). The wound was irrigated with a sterile saline solution (3%) prior to its closure. Histopathologic examination confirmed the diagnosis of hydatid cyst. Finally, the patient was treated with albendazole for a month. There was no recurrence during follow-up visits.



Figure 1. A mass surrounded by a dense fibrous tissue in left breast



Figure 2. Complete excision of the cystic structure



Figure 3. A hydatid cyst with a laminated membrane by gross examination



Figure 4. A hydatid cyst with daughter cysts



Figure 5. A cystic mass filled with a yellowish thick fluid



2. Discussion

Mammary hydatid disease is rare, where only 0.27% of the cysts are localized in the breasts either as a primary site of infection or part of disseminated disease (1). However, primary breast involvement might represent a differential diagnosis of breast lumps in areas endemic for hydatid cyst disease. Clinically, it usually presents as a painless, slowly growing lump (2), mostly affecting women aged between 30 and 50 years old (2, 3). As in the case presented in this report, the diagnosis is frequently delayed for what had been considered a benign lump after observing the laminated membrane during surgery or after receiving the pathology report after surgery (4, 5).

Mammary hydatid disease is usually pre-operatively diagnosed using fine-needle aspiration cytology (FNAC), which shows the hooklets or scolices of the parasite or the laminated membrane (2, 6). Vega et al. (2) were the first to report the characteristic ring-shaped structures inside a hydatid cyst of the breast in an accidentally performed over-penetrated view, attributing this to a difference in the density between the walls and the contents of the daughter cysts inside fluid-filled hydatid cysts. Such an over-penetrated view is recommended in endemic areas if FNAC and/or breast ultrasonography results are suggestive of hydatid disease.

Clinically, a hydatid cyst in the breast might mimic fibroadenomas, cystic mastopathies, chronic abscesses, phylloides tumors or even carcinomas (7). In addition, mammary hydatid cysts have a sonographic appearance similar to those in other organs, showing a well-defined, lobulated mass of heterogeneous echogenicity that may contain multicystic areas (8, 9). Abdominal ultrasonography and chest radiography are required to exclude liver and lung involvement. In addition, serologic tests

may help to confirm the diagnosis. Cystectomy of mammary hydatid cysts is the preferred, curative treatment (4, 5, 9, 10). In the case presented, irrigation of the cyst with a sterile saline solution (3%) was adopted to reduce the possibility of accidental implantation.

3. Conclusions

Mammary hydatid disease is rare, and this represents the first case reported from Yemen. Therefore, this type of cysts should be considered by radiologists and surgeons in the differential diagnosis of breast lumps in areas endemic for the disease.

Acknowledgments

The author thanks the Administration of Kuwait University Hospital of Sana'a University and the patient for giving the permission for publishing the case

Competing interests

The author declares that he has no competing interests associated with this article.

Ethical approval

Publishing this report was approved by the Ethics Committee of the Faculty of Medicine and Health Sciences, Sana'a University. The consent for publication was also obtained from the patient.

References

1. Abi F, el Fares F, Khais D, Bouzidi A. Unusual localizations of hydatid cysts. Apropos of 40 cases. *J Chir (Paris)* 1989; 126: 307–12. [PubMed](#) • [Google Scholar](#)
2. Vega A, Ortega E, Cavada A, Garijo F. Hydatid cyst of the breast: Mammographic findings. *AJR Am J Roentgenol* 1994; 162: 825–6. [DOI](#) • [PubMed](#) • [Google Scholar](#)
3. Quedraogo EG. Hydatid cyst of the breast. 20 cases. *J Gynecol Obstet Biol Reprod (Paris)* 1986; 15: 187–94. [PubMed](#) • [Google Scholar](#)
4. Schechner C, Schechner Z, Boss J, Horowitz J, Yeshurun D. Echinococcus cyst of the breast imitating carcinoma. *Harefuah* 1992; 122: 502–3. [PubMed](#) • [Google Scholar](#)
5. Iloki LH, Lefebvre G, Darbios Y, Tranbaloo P. Hydatid cyst of the breast. Case report. *Rev Fr Gynecol Obstet* 1992; 87: 35–8. [PubMed](#) • [Google Scholar](#)
6. SağınHB, KiroğluY, Aksoy F. Hydatid cyst of the breast diagnosed by fine needle aspiration biopsy. A case report. *Acta Cytol* 1994; 38: 965–7. [PubMed](#) • [Google Scholar](#)



7. Yuksel BC, Ozel H, Akin T, Avsar FM, Hengirmen S. Primary hydatid cyst of the breast with elevated CA 19-9 level. *Am J Trop Med Hyg* 2005; 73: 368–70. [DOI](#) • [PubMed](#) • [Google Scholar](#)
8. Kurul S, Tenekeci N, Topuzlu C. Case report: an unusual mass in the breast: the hydatid cyst. *Clin Radiol* 1995; 50: 869–70. [PubMed](#) • [Google Scholar](#)
9. Pérez JA, Castillo P, Henning E, Pérez A. Breast hydatid cyst. A case report. *Rev Med Chil* 1977; 125: 66–70. [PubMed](#) • [Google Scholar](#)
10. TükelS, Erden I, Ciftçi E, KoçakSM. Hydatid cyst of the breast: MR imaging findings. *AJR Am J Roentgenol* 1997; 168: 1386–7. [DOI](#) • [PubMed](#) • [Google Scholar](#)

