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A Rare Presentation of Hydatid Disease: Breast Lump

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Abstract:

Hydatid disease presenting as a breast lump is extremely rare. When such presentation comes across, it poses diagnostic dilemma as in the present case. A 70 year old woman who presented to our hospital with breast lump was diagnosed as hydatid cyst. Hydatid cyst should be considered as differential diagnosis for patients presenting with breast lump.

Key words: Breast, Echinococcus, Larva, Liver, Cysts, Humans, Sheep.

Introduction

Hydatid disease is caused by larval form of *Echinococcus granulosus* and encountered endemically in sheep breeding communities. Human are occasional intermediate hosts of this organism. The oncospheres, which are ingested, penetrate the intestinal mucosa, enter the blood stream and develop into hydatid cysts. 70 % of the cysts are detected in the liver, 20% in the lung, and the rest in other organs [1]. The breast is rare site of hydatid cyst that accounts for only 0.27% of all cases [2].

Case Report

A 70 year old woman from Sirmour district of Himachal Pradesh presented with lump and pain in the right breast without any family history of carcinoma breast. She had no history of trauma, discharge from nipple, fever or drug misuse. There was no abdominal or chest complaint. On clinical examination, there was an ill-defined, nontender mass of 8.0 x 4.0 cm, with restricted mobility, occupying upper outer and upper inner quadrant of right breast. The left breast was normal. Both nipples were normal and she had no axillary or supraclavicular lymphadenopathy. There was no mass in abdomen. Fine needle aspiration cytology from lump was inconclusive. Ultrasonography, in emergency, confirmed a multiloculated abscess present anterior to the pectoral muscles in right breast. A PA view X-ray of the chest, showed no abnormality.

In emergency, patient was taken for drainage of abscess and on giving small incision, clear fluid along with daughter cysts escaped [Fig.1]. Meanwhile, 0.5% cetrimide was prepared and inserted in cyst cavity before further removal of the rest of the daughter cysts and laminated membrane. Later,

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whole of the cyst was excised and resultant cavity in the breast was irrigated with 0.5% cetrimide and saline before its primary closure. During operation or later, no anaphylactic reaction at any moment was seen. Postoperatively, the patient was put on albendazole 400 mg twice daily and on second postoperative day, ultrasonography of abdomen revealed another hydatid cyst of size 9.5 × 7.0 cm present in the left lobe of liver. The patient was discharged on albendazole and advised for follow up for the management of hydatid cyst of liver.

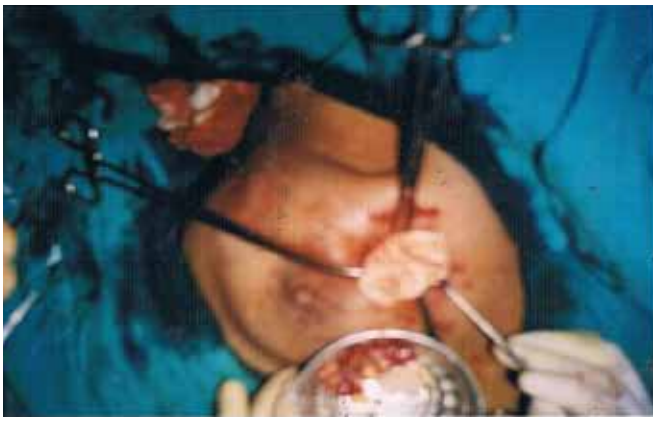

Fig. 1: Hydatid membrane and daughter cysts

Discussion

Hydatid cysts are commonly caused by *Echinococcus granulosus*, but *E. multilocularis* and *E. oligarthus* also infect man. The disease is a serious problem in sheep and cattle rearing areas of the world. Hydatid disease of the breast is extremely rare. Breast can be the only site (primary site) or part of disseminated hydatidosis. It generally affect woman of 30-50 years of age, although wider age range (26-74) has been reported. Pre-operative diagnosis can be made by fine needle aspiration cytology (FNAC) where hooklets or laminated membrane can be seen [3], but in the present case, it was inconclusive as also reported in literature [4]. Ultrasound appearance of breast hydatid cyst is the same as that seen in other organs showing a well-defined loculated mass of heterogenous echogenicity that may contain multiple cystic areas [5] which was altogether missed in the present case and diagnosis of multiloculated breast abscess was made. Immunoblot and ELISA are 80-100% sensitive for liver cysts but only 50-56% sensitive and 25-56% specific for other sites [6]. At times, cysts present at unusual sites create serious diagnostic problems and in rare sites like breast, diagnosis is classically made at time of surgery by direct demonstration of parasite elements in surgical specimen [7]. Hydatid cyst when gets infected becomes difficult to distinguish from breast abscess clinically and tests like FNAC, ultrasound and serological tests may not be conclusive. The non-availability of highly specific serology like immuno-electrophoresis and ELISA in emergency situations further causes diagnostic difficulty.

In a study, on 405 patients of hydatid disease, rare presentation forms were encountered in 69 and out of 69 patients, 28 were primary forms and 41 were having associated to one or more additional locations. However, there was not a single case of hydatid disease of breast in that study, thereby showed extreme rareness of this presentation [8]. In endemic areas, however, patients presenting with breast lump, differential diagnosis of hydatid cyst should always be kept in mind because pre-operative diagnosis of disease provides an opportunity of better management [9,10].

Conclusion

The treatment of hydatid cyst is principally surgical. Post-operative medical treatment reduces recurrence rate and also sterilizes the cysts at the other sites, if associated. FNAC is simple, safe, cheap, immediately available and effective in cases of hydatid cyst of breast but is not always diagnostic.

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