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Hydatid Cyst Presenting as a Breast Lump

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Summary:

The breast is a rare primary site of hydatid disease that accounts for only 0.27% of all cases. We report a 35 year old woman who presented with a breast lump; peroperatively the diagnosis of hydatid cyst was suspected from its gross appearance and confirmed postoperatively by histopathology. To our knowledge this represents the first case of hydatid disease of the breast reported from Bangladesh.

Key words: Hydatid cyst, Breast lump.

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Introduction:

Hydatid cyst is a parasitic disease caused by the larval form of the small tapeworm *Echinococcus Granulosus.* The definitive host of the parasite is dog. Wolves, jackals and cats may harbour the parasite; sheep, cattle and pigs are well known intermediate host. Human beings and a wide variety of other animals serve as an accidental intermediate host[1]. Hydatid disease is endemic in sheep-raising countries such as Australia and Newzealand as well as Mediterranean and Middle-Eastern countries, in some parts of Russia and North and South America[2]. Insufficient hygienic conditions promote the spread of the disease. Hydatid cysts mostly occur in liver (75%) and lungs (15%) with only 10% occurring in other parts of the body[3-6] . Although more frequent reports have appeared in recent years, hydatid disease of the breast still remains rare and accounts for only 0.27% of all occurrences[4-7]. A search of literature for prevalence of hydatid cyst of breast revealed 64 case reports until 2004[2]. We report this case of Hydatid cyst in the breast because of its outstanding rarity and clinical confusion with other cystic lesions and probably this is the first reported case of Hydatid cyst of breast from Bangladesh.

Case Report:

A 50 yrs old postmenopausal housewife, mother of four breast-fed children having no other risk factors of breast cancer presented with a slowly growing painless lump at the upper and outer quadrant of her left breast of 1-year duration; there was no history of trauma, nipple discharge or fever. There was no pet dog in the family but there was history of keeping goats in the family.

On physical examination, a non-tender cystic mass measuring 6cmX6cm was found in the upper and outer quadrant of the left breast with normal overlying skin and nipple. The mass had clearly defined margins and not adherent with overlying skin and underlying muscle. There was no palpable lymph node in axilla and cervical region. The right breast and axilla was normal and systemic examinations did not show any abnormality.

The breast ultrasound showed the cystic lesion and ultrasound guided aspirated fluid was straw coloured; smear of the centrifuged deposit showed scanty cellular material containing histocytes and a few lymphocytes in a clear background with a comment of benign cystic lesion.

Investigations showed normal complete blood count, renal function, liver function, chest X ray and abdominal ultrasound. The patient was scheduled for surgery. An incision was made directly over the lesion. The cyst was easily separated by blunt finger dissection from its surrounding breast tissue and underlying muscle. During the process of dissection, the yellowish exocyst (Figure-1) gave way and the pearly white membranous endocyst (Figure-2) came out and ruptured with spillage of the contents. A diagnosis of hydatid cyst was suspected. The wound was thoroughly cleaned with Normal saline (Hypertonic saline was not available); there was no anaphylactic reaction or urtricarial rash during this procedure. Postoperative period was smooth and the patient discharged on 3rd postoperative day. Post operative Serum antiecchinococcus antibody titre was 1:1000. A titre greater than 1:100 is considered as a positive result[18].

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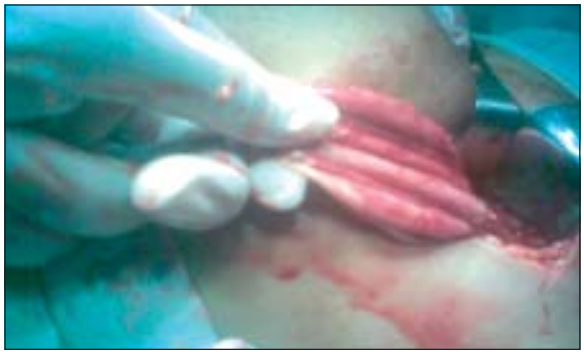

Fig.-1: *Peroperative photograph of the exocyst.*

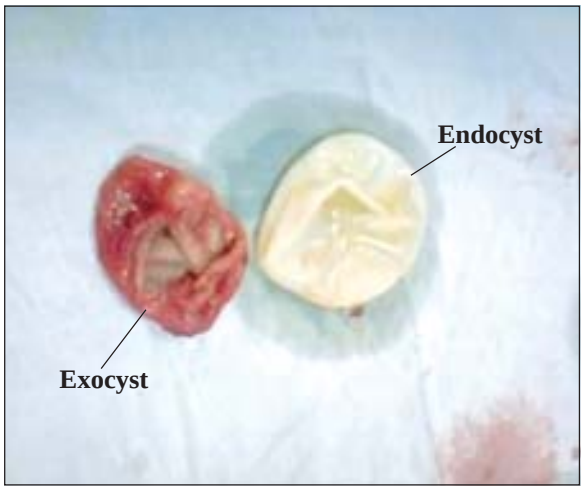

Fig.-2: *Photograph of the retrieved exocyst and endocyst.*

Postoperative Histopathology of the excised cyst confirmed the diagnosis of hydatid cyst. The patient was put on Albendazole 10mg/kg a day postoperatively for six months.

Discussion:

Although hydatid cyst of the breast is extremely rare, it can be the only primary site or part of disseminated hydatidosis[7], it is an important differential

diagnosis in endemic areas. From Bangladesh, there was no previous report of involvement of breast due to E. granulosus though the prevalence of Hydatid cyst in slaughtered cattle in Bangladesh is high (42.15%)[8]. Clinically a hydatid cyst of breast might mimic simple cysts, hemorrhagic cyst, circumscribed carcinomas, chronic abscess and cystic mastopathies[9,12]. Based on the findings of diagnostic hooklets, scolices and certain parts of the laminated membrane on FNAC a preoperative diagnosis can be made[10]. Ultrasonogram is also helpful; Gharbi and coworkers have described five types of ultrasonographic findings of hydatid cyst[11]. In 2003, the WHO Informal Working Group on Echinococcosis (WHO-IWGE) proposed a standardised ultrasound classification based on the status of the activity of the cyst. This is universally acceptd, paricularly because it helps to decide on the appropriate management. Three groups have been recognized Group-1: Active group - cysts larger than 2 cm and often fertile; Group-2: Transition group - cysts starting to degenerate but may contain viable protoscolices; Group-3: Inactive group - Degenerated, partially or totally calcified cysts unlikely to contain viable protoscolices.

Mammogram may show a circumscribed mass, the characteristics ring shaped structure inside the mass in over penetrated view strongly suggests breast hydatid cyst[13].

Serological tests such as Enzyme Linked Immunosorbent Assay (ELISA), indirect haemagglutination and immunoblot techniques confirm the hydatid origin of a cyst. Surgery is still the most effective therapy for Hydatid disease which exists in any location[14,15]. The principle of surgery is total cystectomy with avoidance of spillage of cyst contents with maximum conservation of breast tissue[14,15]. Fine needle aspiration of the cyst fluid and its replacement with scolicidal agent can be an effective alternative treatment[16]. Recurrent cyst have been reported post operatively in 10% of patients. Albendazole for six months after the breast surgery is recommended to decrease the recurrence rate[17].

Conclusion:

Through this case, we want to emphasize the importance of keeping in mind of all concerned (Surgeon, Pathologist and Radiologist), the possibility of hydatid disease in cystic breast lesion.

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