

Traumatic Fat Necrosis of Breast in Male: A Very Rare Clinical Entity

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Abstract- Fat necrosis is a benign condition that can occur anywhere in the breast and can affect women of any age. Although it is frequently seen in female breast, it is a very rare condition that occurs in a male breast, and a very few cases have been reported so far. We report a case of fat necrosis of the breast in a 22-year-old male. The case was referred for surgical excision. The excised tissue showed typical multiple areas of saponification and calcification. A diagnosis of fat necrosis was confirmed by histopathologic examination.

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Introduction

Fat necrosis of the breast is a benign non-suppurative inflammatory process that most frequently occurs in peri-menopausal women. It occurs following trauma to the fatty tissue of the breast, which can occur following a needle biopsy, surgical procedure, radiotherapy, bruise or injury to the breast. It may be acute or chronic. Calcification is the most important feature of fat necrosis. Clinically as well as radiologically on mammogram, it can mimic breast cancer and may be mistaken for cancer in clinical examination or imaging studies (1). In some cases of lumps of the breast, fat necrosis may obscure malignant lesions (2). Although the fat necrosis itself has no malignant potential, it has to be differentiated from breast cancer. The diagnosis of fat necrosis of the breast is a challenging issue because of its varied presentation on mammography, ultrasound, CT, PET-CT, and MRI (3). Hence, histopathologic examination is considered as a gold standard for the confirmation of diagnosis as imaging studies have their own limitations in accurate diagnosis of the condition (1,4). Although most commonly seen in middle-aged women, it is extremely rare in males, and only two cases have been reported so far (5,6).

Here, we report a case of fat necrosis of the breast in male- a very rare clinical entity seen in males and to the best of our knowledge, this is the third report in the world.

Case Report

A 22-year-old male with a history of trauma to the breast three months back presented to the surgical outpatient department with a well circumscribed, palpable, nodular swelling in upper and outer quadrant of the left breast. The lump was initially small in size that gradually increased to the size measuring 8 x 8 x 5 cm. The lump was having restricted mobility and was partly fixed to skin and surrounding tissue. There was no lymphadenopathy, and all the hematological and biochemical parameters were within normal limit. The fine needle aspiration cytology (FNAC) of the lump was suggestive of hemorrhagic smear.

The case was posted for surgery under general anesthesia. A semicircular incision was taken just over the swelling. The incision was deepened, and swelling was excised totally (Figure 1).



Figure 1. Surgically excised breast lump

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It showed multiple areas of saponification and calcification. A specimen of excised breast tissue was sent to the histopathology. A diagnosis of fat necrosis was confirmed on histopathologic examination (Figure 2).

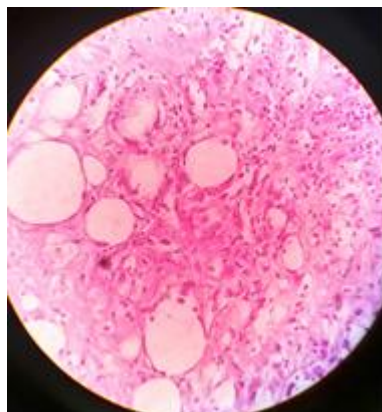


Figure 2. Fat necrosis (10x) showing prominent inflammatory infiltrate rich in plasmacytes and histiocytes replacing many fat spaces

Discussion

Fat necrosis is an inflammatory process of the breast without any clinical significance. Its only medical significance is that it clinically masquerade as breast cancer and hence, to rule out the diagnosis of breast cancer by histopathologic examination is very important. This is an uncommon lesion, and middle-aged women are mostly affected. It is a very rare condition seen in males. The literature survey shows that only two cases of fat necrosis of the male breast have been reported so far (5,6). In earlier case report by Akyol *et al.*, it has been reported in a 57-years old male (6). However, in the present case age of the patient was 22-years only. This indicates that it can occur in any age group although commonly reported in middle-aged women.

It is a false positive lesion mimicking breast cancer on clinical and/or radiological examination (1,2,7). Hence, its accurate diagnosis is of paramount importance. To rule out the possibility of cancer and other breast lesions, and to reach to the exact diagnosis

of fat necrosis, histopathologic examination is the only alternative. Sometimes, fat necrosis may obscure the malignant lesion of the breast. Thus, histopathologic examination not only helps in the confirmation of fat necrosis but also helps in the diagnosis of malignant lesions of the breast, which may be obscured by the fat necrosis (2).

These results indicate that although fat necrosis is commonly seen in women of any age, it may rarely occur in men of any age. The result also indicates that histopathologic examination is must not only for the confirmation of fat necrosis but also for the confirmation of the obscured malignant lesions because of fat necrosis (2).

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