

Picture Quiz-Radiology

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CLINICAL SCENARIO

A 63-year-old female presented with complaints of feeling of a lump in right breast since a few months, now associated with low grade pain. No family history of breast cancer. History of Type 2 Diabetes Mellitus for 30 years and recent onset dyslipidemia — both on oral medications. The patient was sent directly for ultrasound of the breast as a mammogram taken from outside showed asymmetric densities and ill-defined masses in both breasts, more on the right.

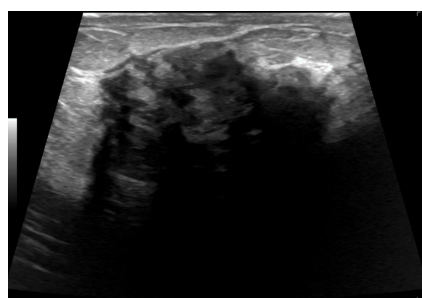


Figure A: US of right breast showing appearance at the site of palpable lumpiness.

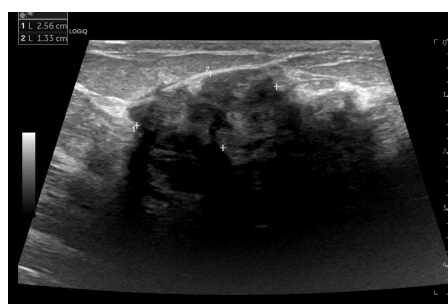
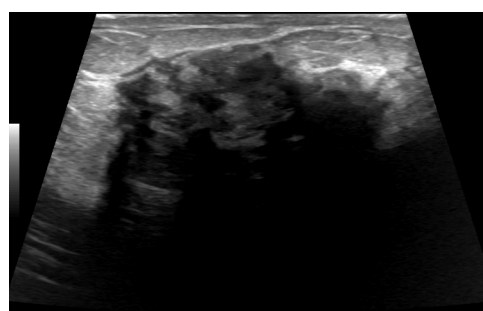


Figure B: Surprisingly, the left breast also showed similar but smaller lesions.

Question: What could be the diagnosis? What were the imaging findings?

ANSWER



Ill-defined hypoechoic areas with significant posterior acoustic shadowing were noted, giving a mass-like appearance. These areas were seen mostly distributed in periductal regions and lacked the definition of a true mass lesion, as the lesion was predominantly periductal. Similar but less conspicuous mass-like lesions with significant

acoustic shadowing were also seen in other areas of both breasts.

The findings were suspicious of diffuse inflammatory pathology and were assigned BI-RADS 4b category with a suggestion of biopsy to rule out malignancy.

- The patient underwent biopsy and subsequently wide local excision.
- Initial biopsy and frozen sections were negative for malignancy.
- The final tissue diagnosis was Diabetic Mastopathy.

Histopathology Report: Perilobular and perivascular dense lymphocytic infiltrates predominantly composed of small mature lymphocytes and occasional plasma cells. Intervening stroma shows brightly eosinophilic keloid-like fibrosis with prominent plump spindle cells. A few mast cells also noted. Areas of hyalinisation seen. No evidence of atypia or malignancy seen in the sections studied. Features were suggestive of Diabetic Mastopathy.

DISCUSSION

Diabetic mastopathy is a condition characterised by the presence of benign tumour-like breast masses in women with long-standing Type 1 or Type 2 insulin-dependent diabetes mellitus. It manifests clinically as a large, painless, hard breast mass that is usually clinically indistinguishable from breast cancer.

Multicentric or bilateral involvement is a relatively frequent phenomenon, often occurring in late stages of the disease. It is a form of lymphocytic mastitis and stromal fibrosis characterised by dense fibrosis and a predominantly B-cell lymphocytic infiltrate surrounding the ducts, lobules, and vessels.

Ultrasound often reveals the most characteristic imaging findings of the disease: irregular hypoechoic masses with marked posterior acoustic shadowing. These sonographic features can mimic breast malignancy.

Biopsy is usually confirmatory, and the need for surgery is often controversial. Diabetic mastopathy is generally a self-limiting disease that does not usually require treatment, although recurrences are frequent

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