



Imaging Sciences Interesting Cases

CASE 159

Richard Gong, MD

CLINICAL PRESENTATION: Patient is a 49-year-old diabetic male with history of metastatic carcinoid tumor to the liver. He presents with right breast tenderness and swelling.

IMAGING FINDINGS: Diagnostic mammogram demonstrates a right retroareolar mass with irregular margins (**Figs. 1 & 2**). Targeted ultrasound demonstrates a retroareolar heterogeneous mass in the right breast (**Fig. 3**). Differential diagnosis at the time included malignancy, carcinoid, and less likely focal nodular gynecomastia. Ultrasound guided core biopsy was performed. Final histopathologic diagnosis of diabetic mastopathy was issued.

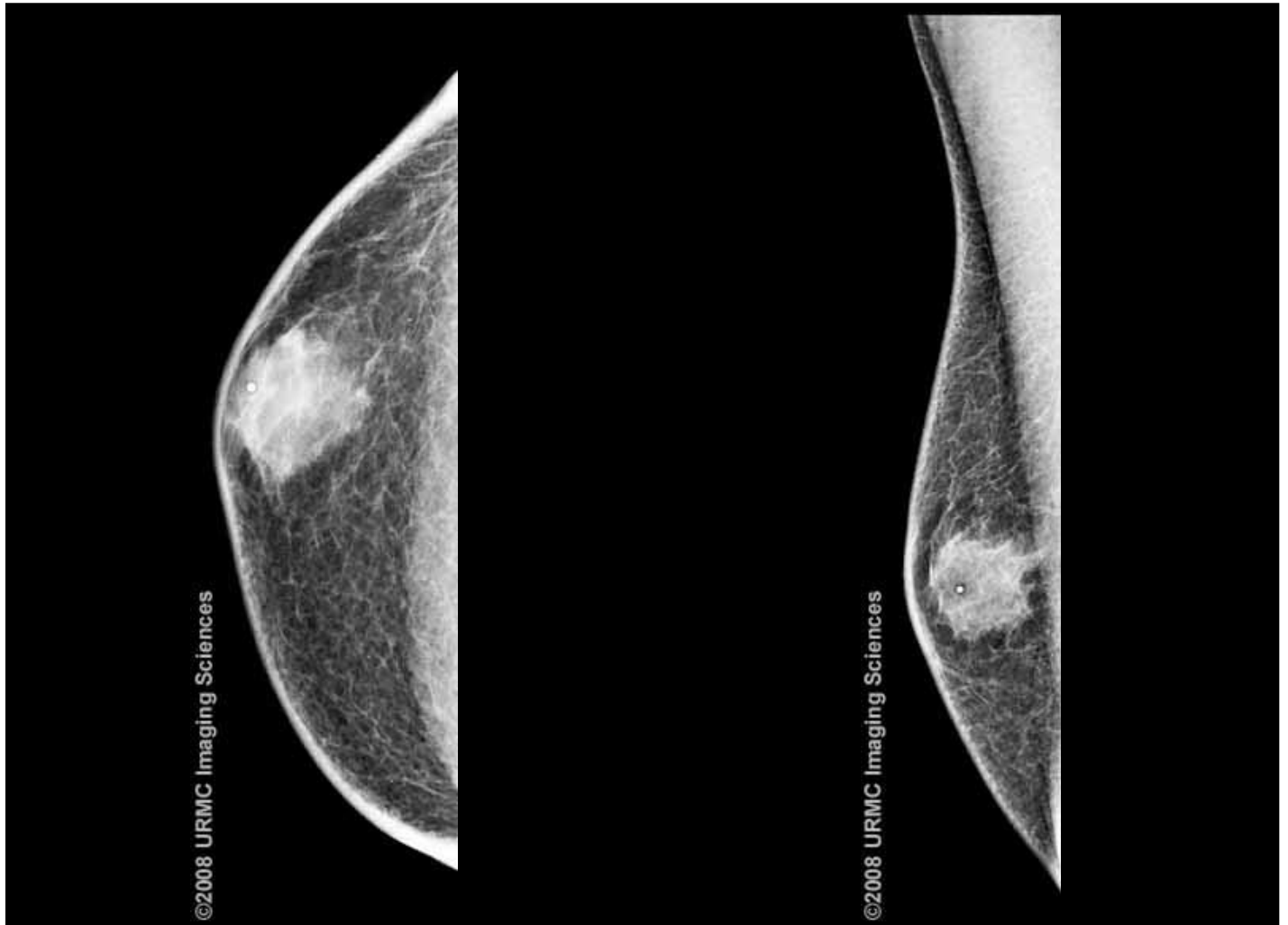


Figure 1: CC view of the right breast.

Figure 2: MLO view of the right breast.

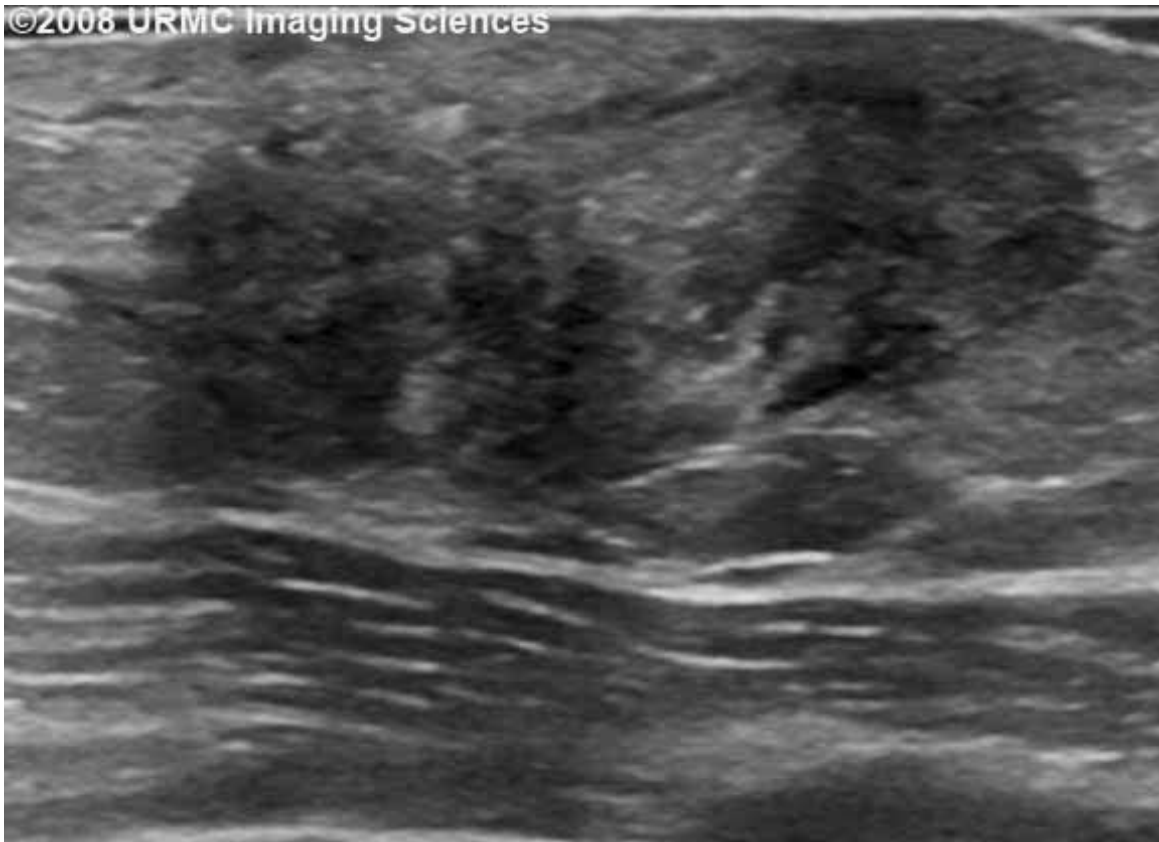


Figure 3: Targeted ultrasound of the right breast mass seen on mammogram.

DIAGNOSIS: Diabetic mastopathy

DISCUSSION: Diabetic mastopathy, first described in 1984, is an uncommon entity usually manifesting in patients with long-standing type 1 diabetes mellitus. The duration of diabetes range from 4 to 37 years. In addition these patients usually also have associated complications from diabetes such as retinopathy, neuropathy and nephropathy. Diabetic mastopathy has also been reported in younger pre-menopausal diabetic women and rarely in patients with thyroid disease.

Diabetic mastopathy is due to an autoimmune reaction to the accumulation of abnormal matrix proteins caused by hyperglycemia. There is atrophy and obliteration of the normal glandular breast tissue with resultant fibrosis forming a hard mass simulating breast carcinoma. The clinical presentation is of a rocky, hard, painless, irregular mass in the breast.

Mammography shows a regional asymmetric mass with ill-defined margins, but no microcalcifications or dense glandular tissue. Ultrasound reveals a hypoechoic mass or region with marked acoustic shadowing in most cases; findings suggestive of scirrhous breast cancer. No color flow is seen with color Doppler.

Histopathologic findings include fibrosis with perivascular, periductal, or perilobular lymphocytic infiltrates. Frequently, these patients undergo surgical excision; however, surgery may exacerbate the disease with recurrences developing in the same location. Therefore this condition may be followed by serial clinical examinations and ultrasound with fine needle aspirations as needed.

REFERENCES:

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