

Xeromammographic and Ultrasonic Diagnosis of a Traumatic Oil Cyst

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The combined use of xeromammography and ultrasonography in the diagnosis of an oil cyst of the breast is described. The etiology was posttraumatic necrosis. The combination of mammographic and ultrasonic findings is felt to be pathognomonic.

Case Report

A 57-year-old female had fallen striking her right breast. After initial pain, swelling and an area of firmness developed. The lump decreased in size, but because of its persistence she sought medical attention. Physical examination revealed a firm nontender mass just above the right nipple, mobile over the chest wall but attached to the skin. No discharge could be elicited from the nipple.

Xeromammography demonstrated a fatty right breast with skin retraction toward a mass of a density identical with the remainder of the breast. This mass was well margined by a dense rim consistent with fibrotic tissue. The mass in the upper outer quadrant was 4.8 cm wide, \times 2.8 cm deep, and 2.6 cm long (fig. 1).

B-scan ultrasonography was performed with a 5 MHz transducer and a Picker Echoview unit utilizing contact and water bath techniques. The mass satisfied the criteria for a cyst with absence of internal echoes at all gain settings, smooth and well defined borders, and good transmission of sound through the

mass (fig. 2). The combination of a cystic mass by ultrasonography and a mass of fatty density by xeromammography led to the diagnosis of an oil cyst resulting from posttraumatic fat necrosis with liquefaction.

At surgery liquefied oil and fat were aspirated from the mass. Microscopic examination of the remaining mass wall showed fibroadipose tissue.

Discussion

Mammographic findings associated with fat necrosis have been previously described [1-3], and the development of an oil cyst following fat necrosis has been described with mammography [3] and at surgery [4, 5]. To our knowledge, the combined use of mammography and ultrasonography in the preoperative diagnosis of this lesion has not been described.

A mass of fat density by mammography would usually be either a lipoma or a galactocele. Neither of these lesions, however, appears cystic by ultrasound [6, 7]. A galactocele could also be excluded in this patient on the basis of age and postmenopausal state. Ultrasonography would be required to exclude a lipoma.

We feel that the findings of a mass of fat density by mammography and a cyst by ultrasonography are pa-

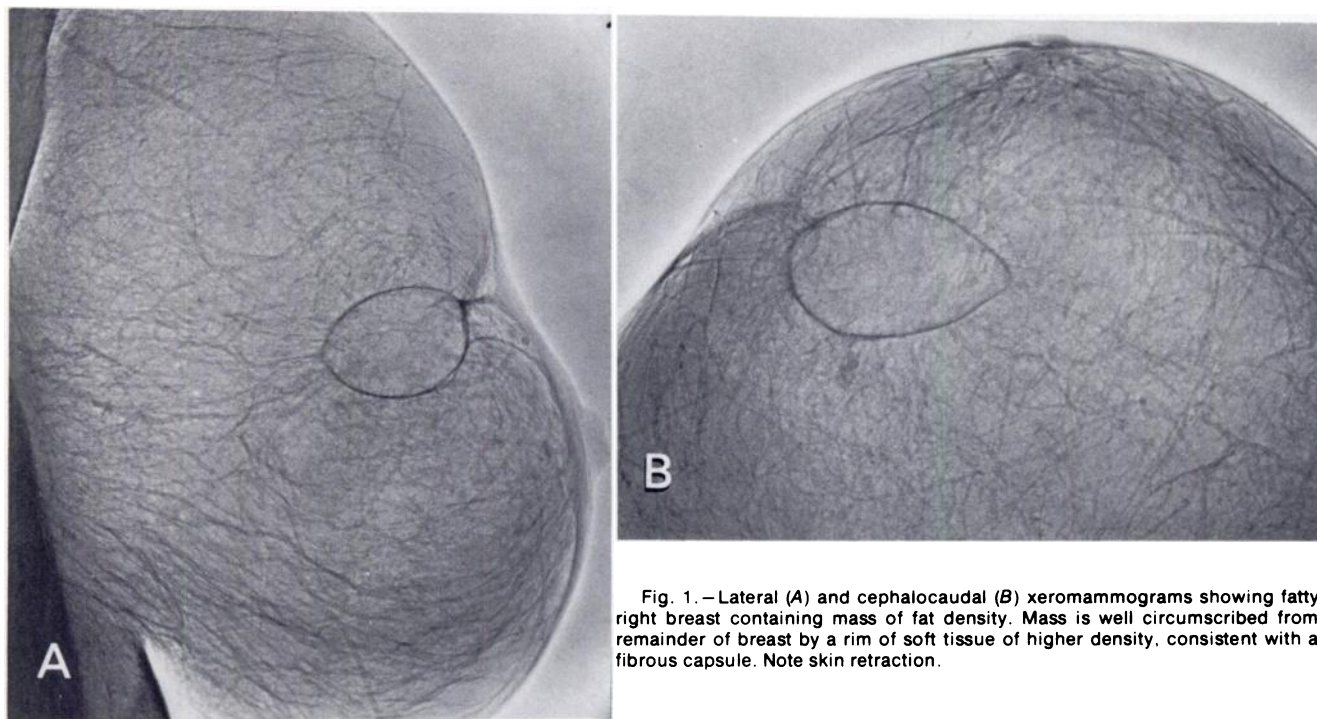


Fig. 1.—Lateral (A) and cephalocaudal (B) xeromammograms showing fatty right breast containing mass of fat density. Mass is well circumscribed from remainder of breast by a rim of soft tissue of higher density, consistent with a fibrous capsule. Note skin retraction.

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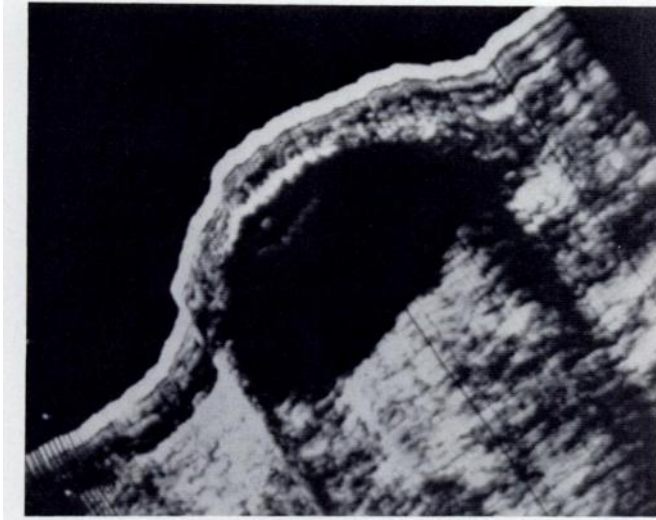


Fig. 2.—Contact B-scan demonstrating echo-free mass with smooth, well defined borders and good through-transmission. Note reverberation artefact beneath front border. Findings indicate cyst.

thognomonic of an oil cyst or liquefied fat. The clinical history of trauma with subsequent development of a mass with skin retraction are consistent with posttraumatic fat necrosis as the etiology.

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