

Galactocele: Three Distinctive Radiographic Appearances¹

Three radiographic appearances of galactocele of the breast not, to our knowledge, described previously in the literature were studied in 11 patients. Mammary nodules with distinct and separate hydro-fat levels were observed in five cases. A nodule containing mixed water and fat densities was seen in one patient, while in the five remaining patients, pneumocystograms revealed masses of a water density mixed with the injected air.

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A galactocele is defined as a benign breast lesion that contains milk. This report describes 11 cases of galactocele presenting radiographic images that differ from classic descriptions of this lesion recorded in the literature.

MATERIALS AND METHODS

Eleven cases of galactocele were reviewed. Clinical records revealed that all patients had a recent history of lactation. The nodules had appeared early during lactation in all cases. The patients were between 22 and 32 years of age.

Bilateral mammograms in the mediolateral and craniocaudal projections were obtained with the patients erect. The nodules were later drained, and a quantity of air equal to that of the aspirated liquid was injected. Two pneumocystograms of the drained lesions were obtained.

RESULTS AND DISCUSSION

A galactocele is a benign lesion, occurring usually in young women during lactation, although it has been described in children (1) and in men (2, 3). The clinical presentation is of a single or multiple nodule, unilateral or bilateral.

Biochemical analysis of the material aspirated from galactoceles shows great variety in the proportions of proteins, fat, and lactose contained (1). Macroscopically, the milk within the galactocele may appear white and of usual viscosity if fresh, or thickened if the liquid is older (3).

Diagnosis was established in our 11 patients by radiographic study and was supported by the presence of a milk-like liquid of variable density in the lesions, the absence of inflammatory sign, a clinical history of recent lactations, and biochemical study of the aspirated material.

Radiographically, a galactocele is seen as single or multiple nodular lesions with a density equal to or less than that of the fibroepithelial tissue of the breast. The pneumocystograms

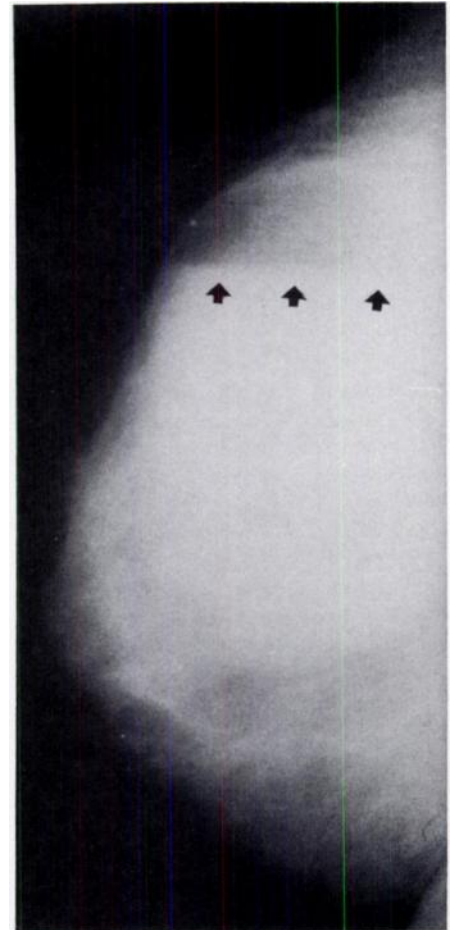


Figure 1. Mammary nodule containing a clear level (arrows) separating a superior zone with fat density from a lower zone of water density. The mammogram was obtained with the patient in an erect position.

obtained following aspiration of the galactocele are described as identical to those following evacuation of a simple cyst (4-8).

In five of our patients, plain mammograms in the mediolateral projection obtained with the patient erect showed nodules containing a level clearly defined by the presence of a zone of fat density in the superior portion of the nodule and a zone of water density in the inferior portion (Fig. 1). Two of these five patients

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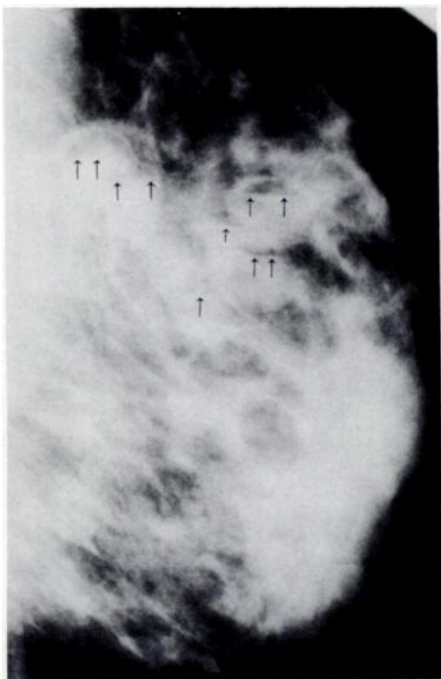


Figure 2. Multiple mammary nodules, each containing a hydro-fat level (arrows).

had multiple nodules, the first showing these levels of separations in all nodules and the latter having some nodules of this type and others of a uniform density (Fig. 2). Because the presence of a water-fat level in the interior of a mammary nodule is characteristic of a galactocele, no further differential diagnosis was carried out in these patients. In our sixth patient, the fat and water densities were mixed, giving an image similar to that of a breast hamartoma (Fig. 3).

In the remaining five cases, the pneumocystograms differed radiographically from the appearance usually seen. Following aspiration of the milky content and the injection of air posterior to the nodule, the presence of intracystic masses of a water density were observed, either mixed in a random form with the injected air or with the material adhered to the nodule wall (Fig. 4). These masses corresponded to curdled milk that was not aspirated because of its viscosity. The radiologic differential diagnosis of this image should include abscess, intracystic clot, infected cyst, or a neoplastic process within the cyst. The definitive diagnosis would evidently be confirmed by study of the aspirated lactic material. ■



Figure 3. Mammary nodule containing areas of water density mixed with fat density.

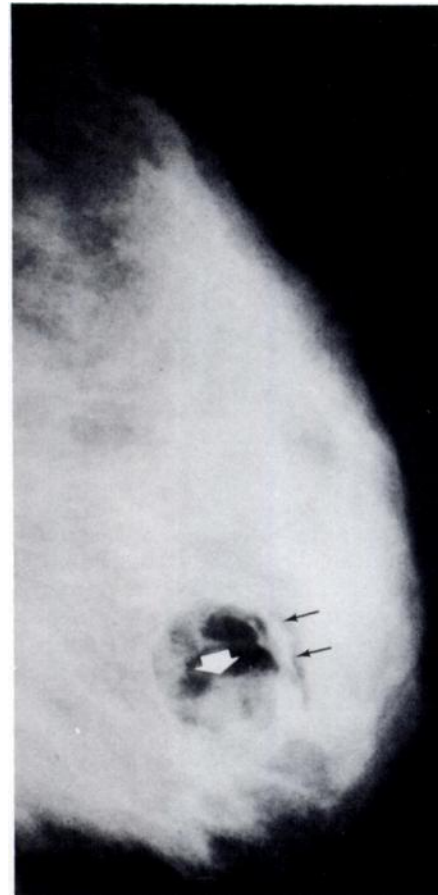


Figure 4. Pneumocystogram shows the presence of lactic material (white arrow) adhering to the nodule wall. By escaping from the interior of the nodule cavity, the air delimits a zone of diffuse enlargement of the galactocele wall (black arrows).

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