Lupus Mastitis - rare but typical imaging findings
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Section: Breast imaging
Area of Interest: Breast
Procedure: Diagnostic procedure
Technique: Mammography
Technique: Ultrasound
Special Focus: Calcifications / Calculi Case Type: Clinical Cases
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Patient: 47 years, female

Clinical History:
A 47 year-old female patient with a history of systemic lupus, underwent routine breast mammography and ultrasound.

Imaging Findings:
A patient with induced menopause and a history of long-standing systemic lupus underwent routine ultrasound and mammography. On the mammograms there were diffuse heterogeneous calcifications (figure 1). Some calcifications were curvilinear and coarse, consistent with fat necrosis (red arrows). Breast density was diffusely increased bilaterally. Compared to the preceding study (figure 2) there was a slight decrease in breast volume and progression of the calcifications. Ultrasound showed a few simple cysts as well as areas with posterior acoustic shadowing (figure 3) in association with fibrotic glandular changes and coarse calcifications.

Discussion:
Lupus Mastitis is a rare clinical and radiological entity, occurring in 2-3% in patients with long-standing systemic lupus erythematosus. Kaposi first proposed the term “lupus panniculitis” in 1883 and 60 years later, Irgang introduced the term “lupus erythematos profundus” [1-3].

The pathophysiology of this entity is unknown but studies have demonstrated that lupus mastitis is an extension of the inflammatory process that involves the overlying skin (panniculitis) or may be the result of vasculitis [1, 2]. A correlation between traumatic procedures and the onset of this entity has also been described, so a conservative strategy in these patients should be advocated. Invasive procedures such as surgical or needle biopsy should be reserved for cases with atypical imaging findings [1, 4]. Some authors defend that the radiological and clinical features alone should suffice to diagnose lupus mastitis [2, 3].

Differential diagnoses include breast carcinoma, Hodgkin’s lymphoma, connective tissue disorders and other granulomatous mastitis. It is often the adequate clinical setting that is the main diagnostic clue [2].

Imaging findings such as dense coarse calcifications, increased fibroglandular tissue and decrease of breast volume
due to fibrosis in patients with erythematous systemic lupus generally provide the diagnosis [1, 2].

This case should alert practitioners to the right diagnosis while avoiding unnecessary biopsies or surgical procedures that may worsen the patient’s condition.

**Differential Diagnosis List:** Lupus mastitis, Breast carcinoma, Hodgkin’s lymphoma, Connective tissue disorders, Other granulomatous mastitis

**Final Diagnosis:** Lupus mastitis

**References:**


**Figure 1**

Description: Oblique lateral (A) and craniocaudal mamography incidences (B) show coarse and diffuse calcifications (red arrows). **Origin:** Magalhaes, S, Centro Hospitalar do Porto, Porto, Portugal
Description: Oblique lateral (A) and craniocaudal mamography incidences (B) represent the previous exam, 2 years before the mamography shown in figure 1. Note that in this exam there are much less calcifications. Origin: Magalhaes, S; Centro Hospitalar do Porto, Porto, Portugal
Description: Breast ultrasound shows fibrotic changes in the glandular tissue and a coarse calcification (red arrow). Origin: MAgalhaes, S. Centro Hospitalar do Porto, Porto, Portugal