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Case Report

Imaging of Breast Tuberculosis, About Clinical Case and Literature Review

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ABSTRACT:
Breast tuberculosis is a rare site of extrapulmonary tuberculosis, which affects young women during periods of genital activity. More often than not, it appears to be primitive. It is also considered to be a cancerous lesion with diagnostic and therapeutic problems. The diagnosis can only be made if the histopathological examination made by breast microbiopsy which highlights the classic appearance of epithelioid granuloma with caseous necrosis or by the demonstration of Mycobacterium in bacteriological study. The basis of current treatment is based on anti-tuberculosis chemotherapy, sometimes combined with Surgery. We report a case of breast tuberculosis in a 42-year-old patient to raise the problem of diagnosis that it raises. The diagnosis could only be made on histology. The evolution was favourable, mainly under antibacillary treatment. Through the data of the literature we recall the radiological, epidemiological, clinical and therapeutic particularities of this condition.

Keywords: Extrapulmonary tuberculosis; Breast; mammography, ultrasound, biopsy.

INTRODUCTION:

Breast tuberculosis is a rare form of extrapulmonary tuberculosis that mainly affects women during periods of genital activity. It accounts for 0.06 to 0.1% of tuberculosis sites and 0.5 to 4.5% of breast pathology [1]. It poses a differential diagnostic problem with breast cancer, due to clinical and radiological similarities.

OBSERVATION:

This is a 42-year-old patient with no defects, no particular pathological history, consulting for left mastodynia evolving for 3 years after delivery. Clinical examination revealed a 6 cm mobile retroareolar mass with no inflammatory reaction, lymph node areas free. The patient was apyretic in good general condition. She had a first-line mammogram due to her age, which revealed a high-density, homogeneous retroareolar mass, without microcalcification within it, roughly oval-shaped. with uncircumscribed, irregular contours (Figure 1a),an ultrasound complement reveals a retroareolar cystic mass of 2.5 cm, with anechoic content, finely echogenic and thickened wall reminiscent of a complicated cyst, BIRADS 4a (Figure 1b), a cytopuncture of the cystic mass reveals an infected galactocele - the patient put on antibiotic treatment for 3 weeks but there was worsening of the symptomatology with the appearance of fever and fistulization to the skin causing Repeat the mammographic and ultrasound assessment and a microbiopsy under ultrasound control which reveals an increase in the volume of the mass (Figure 2) with the appearance of a cystic mass reworked fistuli to the skin (figure 3)lining indicating a histological check by microbiopsy.

The histopathological study of the specimens came back in favor of granulomatous mastitis of the tuberculoid type. The patient was put on anti-tuberculosis treatment for 9 months (RHZ/RH). Radiological examination, mammography and ultrasound no longer found lesions (Figure 4).

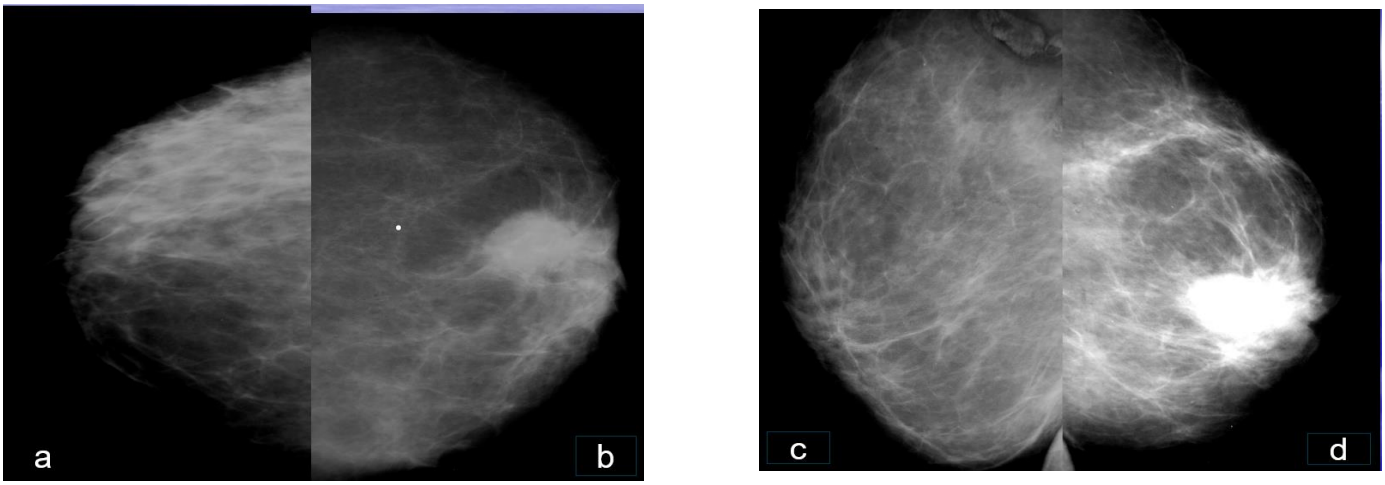

Figure 1a. Bilateral mammogram x-rayed from the front (a), right external oblique (b), left side and left external oblique (d): shows a left retroareolar mass, of high density, irregular shape and contours, without microcalcification within it

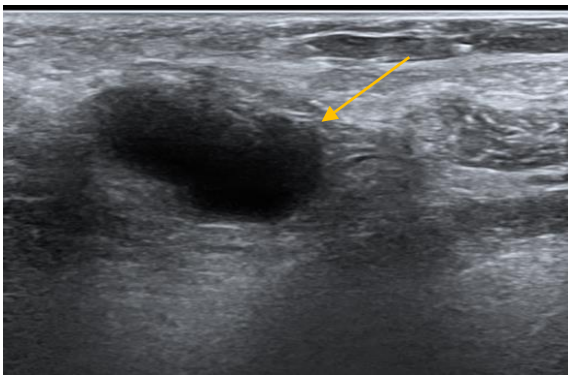

Figure 1b . Left breast ultrasound showing a cystic, heterogeneous, hypoechoic mass with anechoic areas in a very poorly limited range, communicating with the milk ducts.

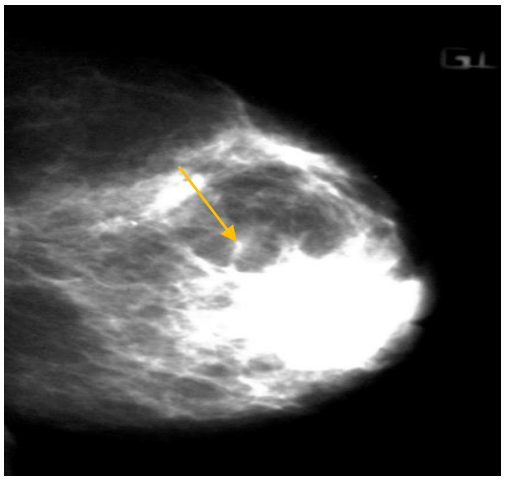

Figure 2. Increase in the size of the left Retroareolar mass.

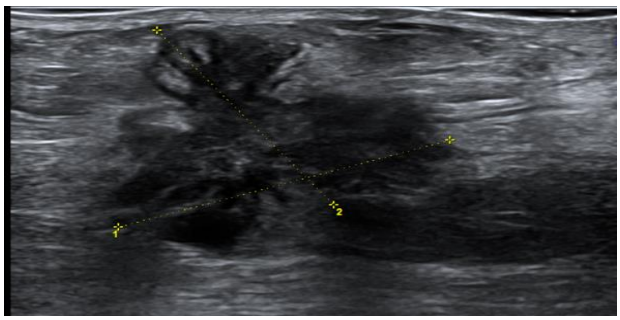

Figure 3. Hypoechoic, heterogeneous mass with zones of necrosis in continuity with the galactophoric ducts.

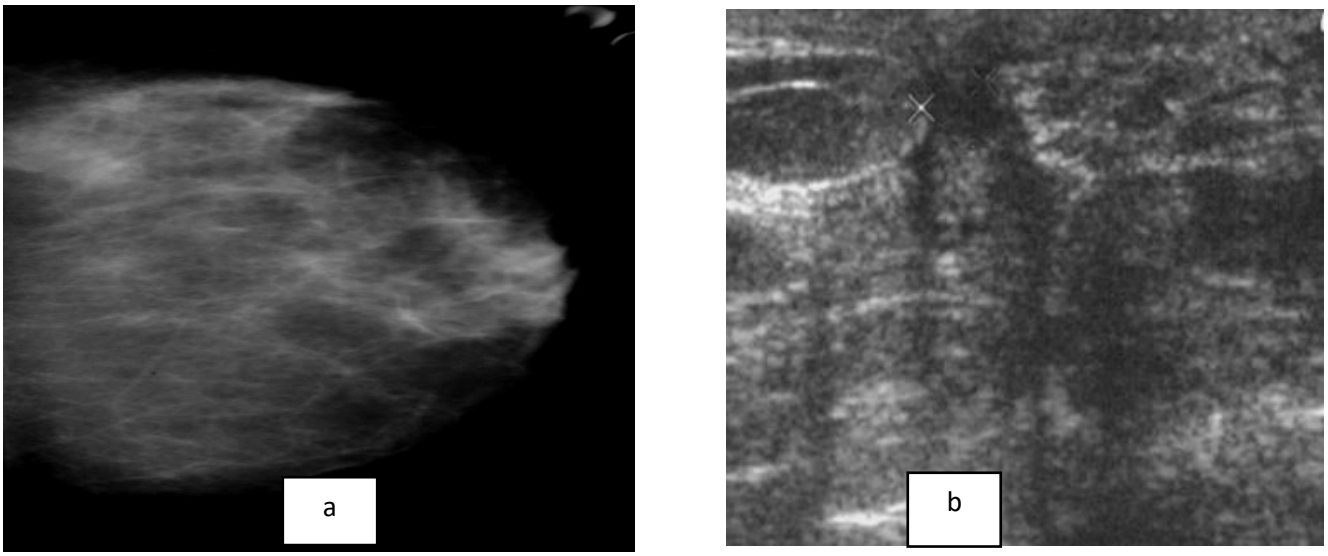

Figure 4. Disappearance of the mass on mammogram (a) and breast ultrasound (b) one year after anti-tuberculosis treatment.

DISCUSSION:

Mammary tuberculosis is rare, even in countries where tuberculosis is endemic. It accounts for 0.5 to 4.5% of breast pathology [1,2], mainly affecting young women [3]. Pregnancy and lactation are risk factors that can be explained by the effect of galactophoric ectasia during lactation. [4,5] The clinical manifestations of mammary tuberculosis are insidious and non-specific [6]. They are highly polymorphic, most often manifested by a painless, hard, irregular breast mass adhering to the skin or deep plane. It may be accompanied by nipple discharge, skin ulceration, fistulization or retraction of the nipple resulting in the appearance of a cold abscess resistant to antibiotics or the appearance of a picture of breast neoplasia [7].

Radiological Aspects:

Imaging of mammary tuberculosis is based on ultrasound-mammography linkage, There are no specific mammographic signs of mammary tuberculosis. However, the overall appearance is that of suspicious images. Thus, this examination lacks specificity and presents only an element of diagnostic guidance. Mammography can be used to objectify three main forms [8,9]:

- The nodular form: a mass of more or less regular contours, the site of microcalcifications in an inconstant manner, with skin thickening in front of it.
- The sclerotic form: generally dense breasts, with areas of fibrosis and dystrophic calcifications.
- The edematous form: similar to that of carcinomatous mastitis, with an increase in diffuse density, skin thickening and an orange peel appearance.

Breast ultrasound shows a hypoechoic or anechoic mass, with or without posterior reinforcement, with signs of galactophoritis. It may also reveal fluid collections, fistulas, or lymphadenopathy. The combination of mammography and breast ultrasound increases the sensitivity and specificity of these two examinations [10].

Diagnosis and Treatment:

The definitive diagnosis of mammary tuberculosis is based on histopathological examination, which reveals the epithelioid granulomas with caseous necrosis, which are characteristic of tuberculosis. Culture or PCR of Mycobacterium tuberculosis are complementary but not very sensitive methods. Breast aspiration has low diagnostic value, as it shows only a non-specific inflammatory appearance.Histopathological examination of the breast biopsy confirms the diagnosis.

Treatment for breast tuberculosis is essentially medical, based on anti-tuberculosis chemotherapy for 6 to 12 months, according to WHO recommendations. Surgical treatment is reserved for complicated cases, such as abscesses, fistulas or forms resistant to medical treatment.

CONCLUSION:

Breast tuberculosis is a rare condition, but one that should not be overlooked, as it can be confused with breast cancer. Imaging, coupled with histopathological examination, makes it possible to establish the diagnosis and guide the treatment. Management is mainly medical, with a good course of anti-tuberculosis chemotherapy.

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