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Case Report

Idiopathic Granulomatous Mastitis Associated with Erythema: A Case Report Associated with Literature Review

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Received: March 10, 2024; **Published:** March 26, 2024

Abstract

Idiopathic granulomatous mastitis (IGM) is a chronic benign inflammatory breast disease that can mimic breast cancer. It is often rarer in older women and poses a problem in diagnosing an inflammatory breast tumor. We report the case of a 77-year-old patient who consulted for the management of an inflammatory breast in whom the examination found an afebrile patient with a left breast with a smooth irregular edematous and painless mass measuring 6 cm topped by fistulation crusts releasing pus under pressure with mobile ipsilateral axillary lymphadenopathy of 1 cm. The remainder of the physical examination was unremarkable. A mammogram plus breast ultrasound were carried out followed by a biopsy which came back in favor of granulomatous mastitis with foci of necrosis to investigate possible tuberculosis which was completed by immunohistochemistry came back in favor of acute granulomatous mastitis. Corticosteroid therapy combined with antibiotic therapy was started with complete regression of the symptoms after three months.

Keywords: *COVID-19 Pandemic; SARS-CoV-2 Infection; Safety Management; Surgery*

Introduction

Idiopathic granulomatous mastitis (IGM) is a chronic benign inflammatory breast disease that can mimic breast cancer [1]. It is an inflammation of the breast of unknown origin that must be distinguished from breast tumors and infections, including tuberculosis [2]. Its symptoms are non-specific and the diagnosis is often not obvious. It is an entity not well known to clinicians and radiologists [3]. We report a case occurring in a 77-year-old patient who presented with an inflammatory breast with multiple erythematous fistulations.

Case Report

Patient aged 77, living in a rural area who consulted for the treatment of an inflamed left breast. She is multiparous, postmenopausal and without any particular medical history. The start of her symptoms dates back to 6 months before her consultation and would be marked by the recurrent occurrence of purulent nipple discharge associated with a skin change such as inflammatory plaques and multiple fistulations of the breast which prompted a local application of lotion. Given the persistence of the symptoms and the appearance of reddish erythematous nodular lesions, the patient decided to consult our structure for treatment.

Clinical outcome

The general examination found an afebrile patient in good general condition. Examination of the breasts found asymmetrical breasts with an inflammatory left breast containing a smooth irregular edematous and painless mass measuring 6 cm topped by crusts and multiple fistulations (Figure 1) releasing pus on pressure with lymphadenopathy. mobile ipsilateral axillary. The contralateral breast was unremarkable. The rest of the somatic examination was unremarkable.

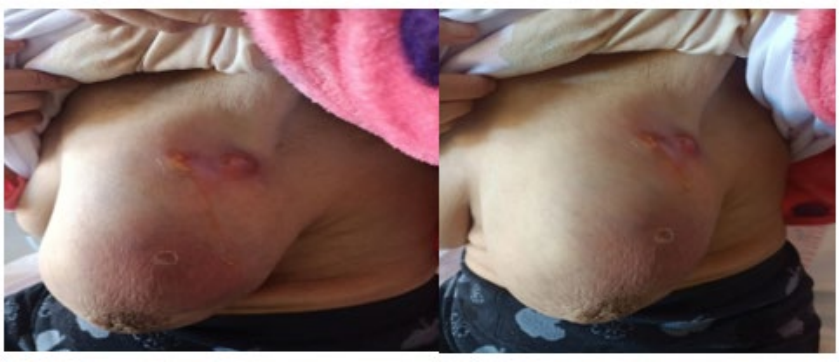

Figure 1: *Breast with multiple fistulation scars + inflammatory erythematous plaques.*

Diagnostic approach

A mammogram carried out found a large opacity affecting the upper outer quadrant of the left breast extended to the different quadrants of 99x80 mm classified ACR4 and the breast ultrasound found a solido-cystic mass interesting the upper outer quadrant of the left breast, extended to the different quadrants well limited, oval in shape, regular contours, with anechoic content measuring approximately 80x54 mm, associated with infiltration of fat all around and ultrasound exploration of the axillary areas found a lymph node formation without sign of atypia, histological result was in favor of granulomatous mastitis. The etiological assessment was unremarkable. It consisted of serologies (HIV, hepatitis B, C and syphilis), research for BK, research for anti-neutrophil cytoplasmic antibodies (ANCA), C3 and C4 supplements, evaluation of renal function (urea, creatine and proteinuria) and fasting blood sugar. The final diagnosis of idiopathic granulomatous mastitis associated with erythema was made.

Therapeutic intervention and follow-up

The patient was put on medical treatment based on oral corticosteroid (prednisone 20 mg) for 6 weeks and antibiotic therapy based on amoxicillin plus clavulanic acid 1 g/8. The control breast ultrasound after the treatment was unremarkable following good therapeutic compliance.

Discussion

IGM represents a benign inflammatory disease of the breast. It appears to be an idiopathic disease due to the influence of certain environmental stimuli in genetically predisposed subjects [1]. The pathological mechanism remains poorly understood. To date, three main hypotheses have been proposed to explain this disease: autoimmune genesis, infectious disease and hormonal disorders [4,5]. This pathology occurs mainly in women during periods of genital activity [6] but can also occur in postmenopausal women as in our case. In a study [7] carried out on a series of 20 cases, the authors reported that IGM represented 2% of breast pathologies treated in their structure with an average age of 38.1 years and 55% of the women belonged to the age group of 30 to 39 years old. Clinically, the main

symptom of MG is a painful mass and approximately 50% of patients develop erythema and swelling as symptoms of inflammation of the affected breast. Other symptoms are hyperemia, areolar retraction, fistula and ulceration. Approximately 37% of patients show signs of abscess [7]. Sometimes IGM can manifest as a hardening of the breast with collections of pus in a non-febrile context, suggesting a cold abscess of the breast and leading to a multitude of consultations and attempts at treatment [3]. This symptomatology nevertheless remains non-specific. On imaging, the lesions described do not differ from those described in certain forms of breast cancer. In our specific case, the mammogram described a large, well-defined opacity and the breast ultrasound found a solido-cystic mass associated with infiltration of fat all around. The definitive diagnosis is based on histology using a biopsy fragment. The histological study of our case found granulomatous mastitis. Therapeutic management is essentially based on medical treatment which combines corticosteroid therapy + an antibiotic aimed at reducing the lesions [6].

Conclusion

Idiopathic granulomatous mastitis is a rare clinical entity that poses a diagnostic problem as we see in this case. Its symptomatology and imaging remain atypical and non-specific. Biopsy and histological study make it possible to correct the diagnosis and adapt the treatment, thus avoiding mutilating surgery.

Conflicts of Interest

The authors declare no conflicts of interest.

Author Contributions

All authors participated in the care of the patient, and in the writing and correction of the manuscript. They all also declare having read and approved the final version of the manuscript.

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Volume 13 Issue 4 April 2024