

## Successful Treatment of Idiopathic Granulomatous Mastitis with Oral Prednisolone

Chiguer M<sup>1\*</sup>, Farid N<sup>1</sup>, Dref M<sup>2</sup>, Fakhri A<sup>2</sup>, Rais H<sup>2</sup>, Akhdari N<sup>1</sup>, Hocar N<sup>1</sup>, Amal S<sup>1</sup>

<sup>1</sup>Dermatology department, Cadi Ayyad University, Mohammed VI University Hospital Center, Marrakech, Morocco

<sup>2</sup>Anatomy and Pathology department, Cadi Ayyad University, Mohammed VI University Hospital Center, Marrakech, Morocco

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\*Corresponding author: Chiguer Meriem

### Abstract

### Case Report

Idiopathic granulomatous mastitis was first described in 1972 by Kessler and Wolloch. It is a rare breast condition of unknown etiology. The challenge is to differentiate it most importantly from breast cancer and other causes of mastitis. In this report, we describe a successful response of idiopathic granulomatous mastitis to oral prednisolone (1mg/kg/day). The patient showed a significant decrease in the size of lesion with significant reduction in intensity of color and thickness, until almost total disappearance. Our experience suggests that steroid therapy may be recommended in all cases of idiopathic granulomatous mastitis as the first-line therapy.

**Keywords:** Granulomatous mastitis, Idiopathic, Breast abscess, Corticosteroid, mastitis.

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## INTRODUCTION

Idiopathic granulomatous mastitis (IGM) is a rare, benign, inflammatory breast disease of unknown etiology. The diagnosis remains challenging for clinicians, and optimal therapy is still unclear. However, corticosteroids have shown efficiency in this condition, and may avoid invasive wide excision and iatrogenic complications [1].

### Case report

A 23-year-old woman, G1 P1, with no previous history, complained from 6 months of an indurated and painful mass of the right breast.

Initially, the management was provided by clinicians in emergency medicine and infectious disease. Breast biopsy revealed an extensive granulomatous mastitis, and the patient was treated as breast tuberculosis with no improvement. Her mass had grown and was extremely tender. After 5 months of the antibacillary treatment, the patient developed a DRESS syndrome with generalized rash, fever, eosinophilia and mild transaminitis. Antibacillary medication was discontinued and patient was referred to our department.

The clinical examination found a painful and indurated mass, 10 cm in diameter, in the lower outer quadrant of the right breast. The overlying skin showed

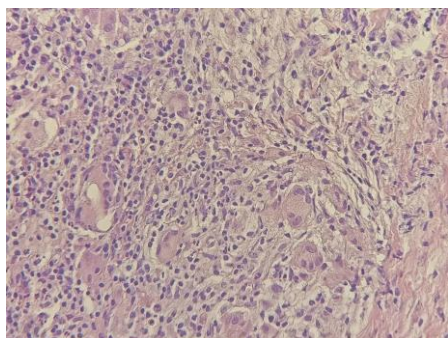
signs of inflammation and multiple fistulations with purulent discharge (Figure 1).



**Fig-1: Indurated mass, in the lower outer quadrant of the right breast. The overlying skin showed signs of inflammation and multiple fistulations.**

No palpable axillary lymph nodes were found. Breast ultrasound showed skin thickening with hypoechoic large non-homogeneous areas, irregular lesions with non-homogeneous content, and multiples fistula penetrating the skin. Mammography showed an ill-defined breast mass and focal asymmetric density associated with architectural distortion. Culture of breast tissue reported klebsiella pneumoniae, and the patient was treated with ertapenem (21 days) and amikacin (5days) with no improvement. Tuberculosis culture and fungal investigation were negative. The PCR test result for mycobacterium was negative.

Histology showed a non-necrotizing granuloma in the breast lobules, in combination with a localized infiltration of giant cells, epithelioid histiocytes, and plasma cells (Figure 2).



**Fig-2: Histology showed a non-necrotizing granuloma in the breast lobules, in combination with a localized infiltration of giant cells, epithelioid histiocytes, and plasma cells**

Physical examination, biological and radiological investigations did not reveal any element suggestive of autoimmune or systemic granulomatous disease, diabetes, or thyroid dysfunction. Consequently, the diagnosis of idiopathic granulomatous mastitis was made and oral prednisone (1mg/kg/day) was given for 8 weeks. We had satisfactory results, fistulations healed, and discharge stopped with complete remission of wounds and shrinkage of the breast mass after 6 weeks of therapy (Figure 3). Then, corticosteroids were slowly tapered, and the therapy was stopped 4 months later. During the follow-up of 9 months after stopping oral prednisone, recurrence was not observed, and resolution still maintained.



**Fig-3: Total disappearance of breast mass after 6 weeks of steroid therapy. Fistulations healed, and discharge stopped**

## DISCUSSION

Dermatologists are competent to examine the total skin surface, including the breasts. Idiopathic granulomatous mastitis is an unusual breast condition that a dermatologist may encounter in the course of practice. It is a rare inflammatory breast disease, and etiopathogenesis is still mysterious [2]. The disease course is habitually prolonged with an important influence on quality of life. Our case demonstrates how IGM can mimic infectious mastitis and highlight the

need of excluding other causes of mastitis before the diagnosis of IGM can be made. There is no consensus on disease management [1, 3]. Two options are proposed in the literature [4-7]: corticosteroids versus a surgical approach. Corticosteroid therapy is a non-invasive treatment; it is effective in the treatment of IGM by reducing the lesion size and extent. Wide excision or mastectomy lead to good outcomes, but they expose to the possibility of scars, asymmetry, and iatrogenic complications. Surgical approach should be reserved for cases who have insufficient response to corticosteroid therapy. Our report demonstrates the success of corticosteroid therapy with prednisolone (1 mg/kg/day). We had satisfactory result with no serious side effects. The patient showed a significant decrease in the size of lesion with significant reduction in intensity of color and thickness, until almost total disappearance. Our experience suggests that steroid therapy may be recommended in all cases of IGM as the first-line therapy.

## CONCLUSION

Idiopathic granulomatous mastitis is regarded to be a diagnostic challenge. Multidisciplinary cooperation of breast specialists can accelerate the whole diagnostic process, avoid iatrogenic complications, and shorten the time of treatment.

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