

Idiopathic Granulomatous Mastitis Mimicking Breast Abscess

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1. Introduction

Idiopathic granulomatous mastitis is a rare chronic inflammatory breast condition that can mimic breast abscess and breast cancer. Granulomatous mastitis typically presents as a unilateral breast mass. We present a case of idiopathic granulomatous mastitis mimicking breast abscess.

2. Case Report

24-year-old African American female, gravida 1 para 1, presented with a 4-month history of recurrent right breast abscess. The patient had no significant past medical history. She was on intramuscular medroxyprogesterone acetate for contraception for last 3 years.

She was given oral Amoxicillin-clavulanate for 1 month without improvement. Ultrasound showed a 1.7x 3.4 x 2.1 cm mass. She was referred to a breast surgeon 2 months later who incised and drained purulent material from the lesion; tissue gram stain and cultures remained negative. She was started on vancomycin for suspected methicillin-resistant *staphylococcus aureus* and discharged on trimethoprim-sulfamethoxazole and subsequently developed a rash to trimethoprim-sulfamethoxazole.

She improved after surgical drainage, then again developed swelling of her right breast and was re-admitted 1 month later.

On examination she was afebrile. Right breast mass was tender on palpation with superficial erythema without lymphadenopathy.

Wide surgical excision of 10x 9.5x3 cm of right breast was performed which revealed minimal purulence and fat necrosis. Tissue cultures were negative including mycobacterium and fungal except one culture which grew rare *corynebacterium* species which was considered contaminant. Histopathology was consistent with granulomatous inflammation with fat necrosis consistent with idiopathic granulomatous mastitis (Figure 1-3).

The patient was discharged on 7th day of hospitalization with close follow-up. She was started on prednisone with excellent clinical response.

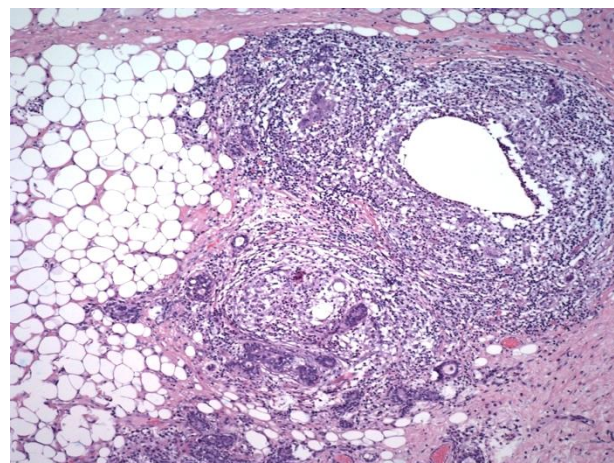


Figure 1: Fat Necrosis along with chronic inflammation and giant cell response

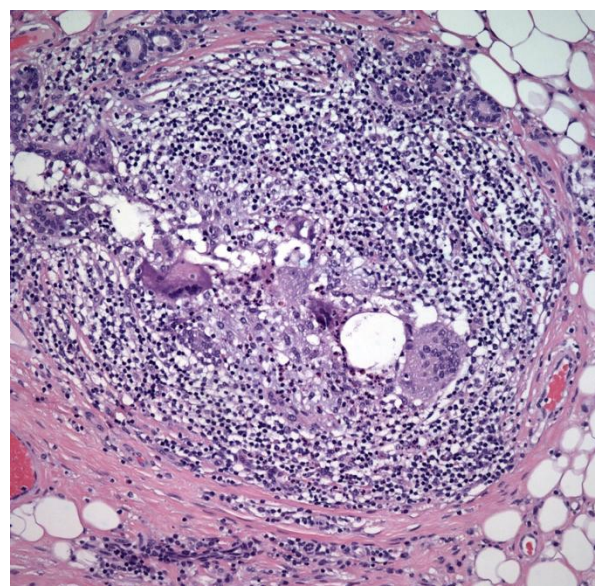


Figure 2: Chronic inflammation and giant cells (High power)

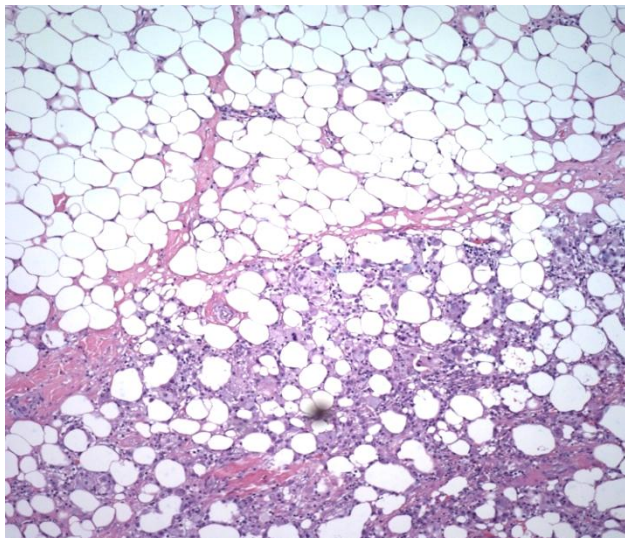


Figure 3: Fat Necrosis (upper left) with histiocytes and chronic inflammation (lower right)

[3] Marriott DA, Russell J, Grebosky J, Wallace AM, Joste N, Royce ME Idiopathic granulomatous lobular mastitis masquerading as a breast abscess and breast carcinoma. *Am J Clin Onco* 2007; 30:564-5

[4]

3. Discussion

Idiopathic granulomatous mastitis is an idiopathic condition affecting women of childbearing age. Etiology proposed includes localized immune reaction to breast, oral contraceptives, pregnancy, breast feeding and trauma. Lesions are of variable size firm tender ill-defined usually unilateral.

Differential diagnosis includes bacterial mastitis, tubercular or fungal mastitis, foreign body granulomas, sarcoidosis and Wegener's granulomatosis.

Mammogram and ultrasound findings are nonspecific.

Definitive diagnosis is by histopathological examination which features non caseating granulomas with histiocytes, giant cells and negative microbiology.

Treatment modalities include close follow up, immunosuppression with corticosteroids with or without methotrexate and or surgical excision.

4. Conclusions

Idiopathic granulomatous mastitis can mimic breast abscess. Recognition of this entity should be considered in recurrent sterile breast abscess. Definitive diagnosis requires histopathological examination. Treatment include immunosuppression with or without surgical excision.

References

- [1] Patel RA, Strickland P, Sankara IR, Pinkston G, Many W Jr, Rodriguez M. Idiopathic granulomatous mastitis: case report and review of literature *J Gen Intern Med* 2010;270-3.
- [2] Centers for Disease Control and Prevention (CDC). Idiopathic granulomatous mastitis in Hispanic women - Indiana, 2006-2008. *MMWR Morb Mortal Wkly Rep* 2009; 58:1317-21.