



Case Report

Idiopathic Granulomatous Mastitis: A Clinicopathological Review of a Rare Case

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ABSTRACT

Background: Idiopathic granulomatous mastitis (IGM) is a rare chronic inflammatory disease, the etiology of which is obscure. Clinically it presents in the reproductive age group as a breast lump with or without enlarged axillary lymph nodes and thus simulates carcinoma.

Case History: We present a case of idiopathic granulomatous mastitis in a 35 year old female patient, who presented as a breast lump. Fine needle aspiration cytology was done with excision of the lump.

Conclusion: IGM is a diagnosis of exclusion and thorough work up is essential before giving the diagnosis.

Key Words: Idiopathic Granulomatous Mastitis, Cytological features, Clinical Dilemma.

INTRODUCTION

Idiopathic Granulomatous Mastitis (IGM) is a rare chronic inflammatory disease, usually seen during pregnancy or lactation period. [1] The etiology of IGM is poorly understood. [2] Clinically it mimics carcinoma hence it is important to distinguish the entity so that proper treatment guidelines can be started.

CASE HISTORY

35 years female patient presented with lump in right breast since 1 month which was gradual in onset and painless with no history of trauma. Obstetric history revealed delivery 3 years back. All the investigations including complete blood

count, erythrocyte sedimentation rate, chest X ray were within normal limits.

Clinical examination revealed 6 x 5 cm, firm lump in the upper inner quadrant of right breast, which was slightly mobile, non-tender with a normal overlying skin. Axillary lymph nodes were not palpable.

Pathological features: Fine needle aspiration cytology of the lump was performed which revealed cohesive clusters of benign looking ductal epithelial cells encroached by numerous polymorphs forming microabscesses, histiocytes, lymphocytes, plasma cells and granulomas composed of epithelioid cells and giant cells.

20% ZiehlNeelson staining and PAS stain did not reveal organisms. Microbiological culture was also negative for organisms.

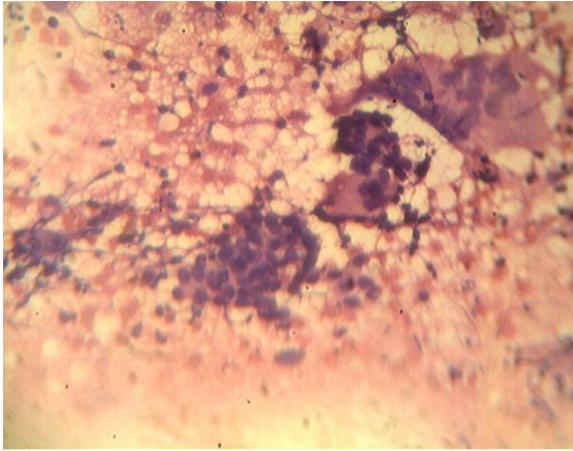


Fig. 1- Lobulocentric inflammation as seen on FNAC (400 x H & E)

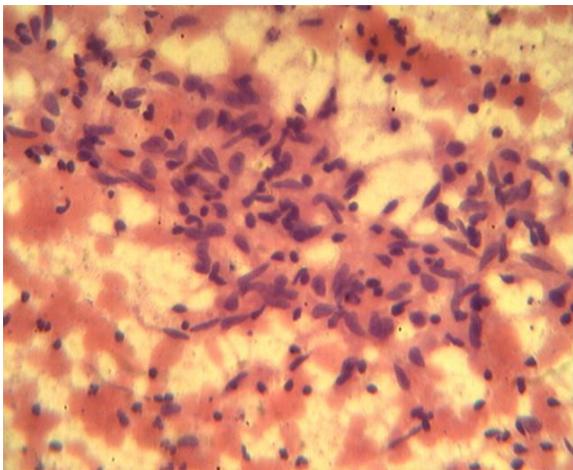


Fig. 2- Inflammatory infiltrate composed of epithelioid granuloma, lymphocytes FNAC (400x H&E)

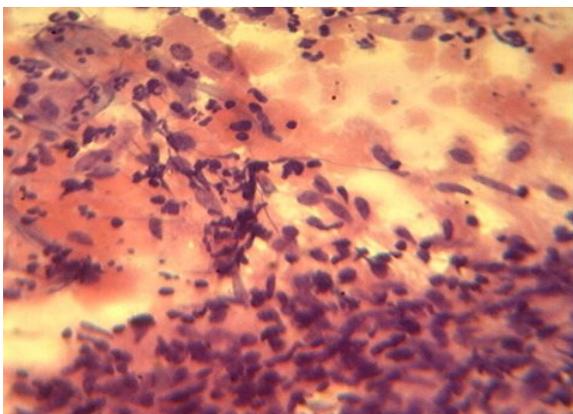


Fig. 3- Well formed granuloma with microabscesses on FNAC (400x H&E)

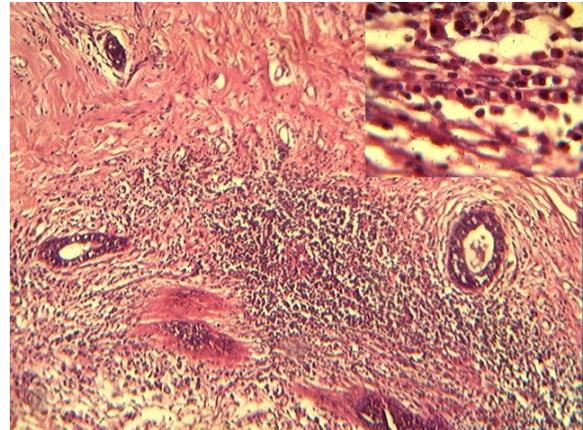


Fig. 4- Lobulocentric inflammation on HP, Inset- Granuloma (100x, 400x H & E)

Considering these features, tuberculosis, fungal infection and sarcoidosis were ruled out. Diagnosis was given as Idiopathic Granulomatous Mastitis. Excision of the lump was done and histopathological findings confirmed the diagnosis.

DISCUSSION

Granulomatous mastitis is an uncommon breast disease that was first described by Kessler and Wolloch in 1972. [3] The disorder presents as breast lump within 5 years of child birth as in our case. Only few hundred cases have been reported worldwide reflecting the low incidence of the disease. [4,5] Clinically IGM presents as a breast lump with or without nipple retraction and palpable axillary lymph node which simulates cancer. [6] Our case did not reveal nipple retraction or palpable axillary nodes. Radiological images are non specific. [7,8]

Different etiological factors have been postulated including infection, prolactinemia, autoimmune disorders, trauma, immune reaction to extravasated milk. [9-11] In our case there was no evidence of infection or trauma. FNAC is a simple, non- invasive, cost effective technique which can be used for diagnosis of IGM as in our case. The cytological smears as in our case, reveal non caseating granulomas which

are lobulocentric along with inflammatory cells composed of lymphocytes, plasma cells with or without neutrophilic abscesses. These features overlap with other disorders like tuberculosis, fungal infections, sarcoidosis and fat necrosis. Special stains like ZiehlNeelson stain, PAS stain and culture study rule out infectious etiology. X-ray chest rules out Sarcoidosis. Lobulocentric inflammation is not a feature of sarcoidosis. Fat necrosis reveals abundant foamy histiocytes which are not seen in IGM. Thus definitive diagnosis depends on negative microbiological studies and other studies. [12] Similar findings were noted in our case.

Management and prognosis:

The patients are managed conservatively with steroid therapy. Surgical treatment is advised for steroid non responsive and recurrence. [6,13] Six months follow up in our case is uneventful.

CONCLUSION

Idiopathic Granulomatous Mastitis is a chronic inflammatory disorder of uncertain etiology. Clinical examination and radiological features are unable to give the definitive diagnosis which can be achieved with FNAC and histopathological examination. Microbiological study and other relevant investigations should be done to rule out tuberculosis and carcinoma since these forms are cured with appropriate treatment.

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