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Granulomatous Mastitis-A Case Series of 10 Patients

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ABSTRACT
Granulomatous mastitis is a rare benign inflammatory breast disease that affects mostly woman of childbearing age. Clinical features and radiological findings mimic inflammatory mastitis and inflammatory carcinoma. So fnac is important to prevent extensive surgery. 1 year retrospective study was conducted between jan 2022 to dec 2022. 10 cases of granulomatous mastitis were retrieved along with their clinical correlation and radiological findings.9 cases were clinically and radiologically benign and 1 was suspicious of malignancy. All cases were cytologically diagnosed as granulomatous mastitis and confirmed on histopathology . Histopathology is fundamental for correct diagnosis so that appropriate treatment can be given to the patients.

I. INTRODUCTION

Granulomatous mastitis is an uncommon inflammatory lesion of the breast. It has various causes like tuberculosis, fungal infections, connective tissue disorders, fat necrosis, sarcoidosis and idiopathic. Idiopathic granulomastitis mastitis (IGM) is a rare benign disease of the breast first described by Kessler and wolloch in 1972. It is most commonly seen in woman of child bearing age with history of breastfeeding. Common clinical presentation is unilateral breast lump. It is characterized by chronic granulomatous necrotizing lobulitis. Etiology is uncertain and autoimmune association is suggested with diagnosis made by exclusion.The clinical and radiological presentation mimics both inflammatory and carcinoma so fnac is important to prevent extensive surgery

II. CASE PRESENTATION

Retrospective case study was done for 1 year from Jan 2022 to Dec 2022. 10 cases were diagnosed as granulomatous mastitis.The mean age of patients was 29 years .All patients were females. 5 cases were lactating. There was no significant past medical history.

9 patients presented with firm breast lumps which were painful in 6 cases. Overlying skin was erythematous. Pus discharge with fistula formation was seen in 3 cases. There was no axillary lymphadenopathy and rest of the physical examination was normal. Radiological findings were benign in all 9 cases. Fnac was done which yielded blood mixed aspirate. Smears showed chronic inflammatory cells comprising of lymphocytes, histocytes, neutrophils. There were loose aggregates of epithelioid cells with occasional giant cells. There was no necrosis in 8 cases and 1 case showed necrosis. Occasional clusters of benign ductal epithelial cells were seen. ZN stain for AFB were negative in 8 cases and positive in 1 case. So presumptive diagnosis of granulomatous mastitis was made in 8 cases and tuberculous mastitis in 1 case .Lumpectomy was done and tissue was sent for histopathological examination and pus was sent for AFB and culture sensitivity.Sections showed non necrotizing epithelioid granulomas centered around ducts and acini accompanied by a mixed inflammatory infiltrate extending into surrounding fat and muscle. AFB of drained pus was negative. So diagnosis of idiopathic granulomatous was confirmed. Tuberculous mastitis was also confirmed on histopathology.

1 case was a 60 year old female who presented with swelling right breast since 2 months. There was history of similar swelling in left breast which was relieve by medication. Swelling was 4-5 cm, hard, irregular,retroaereolar, tender. Nipple was slightly inverted and there was no axillary lymphadenopathy. Sinus tract was present near nipple.Mammography showed malignant features(-BIRADS 4A).It was clinically and radiologically mimicking carcinoma. FNAC was performed, smears showed numerous well formed epithelioid granulomas admixed with many multinucleatedgiant cells along with chronic lymphomononuclear inflammation. Occasional benign ductal and epithelial cells were also seen. Features were of granulomatous mastitis.Then lumpectomy was done and histopathological features were of idiopathic granulomatous mastitis.

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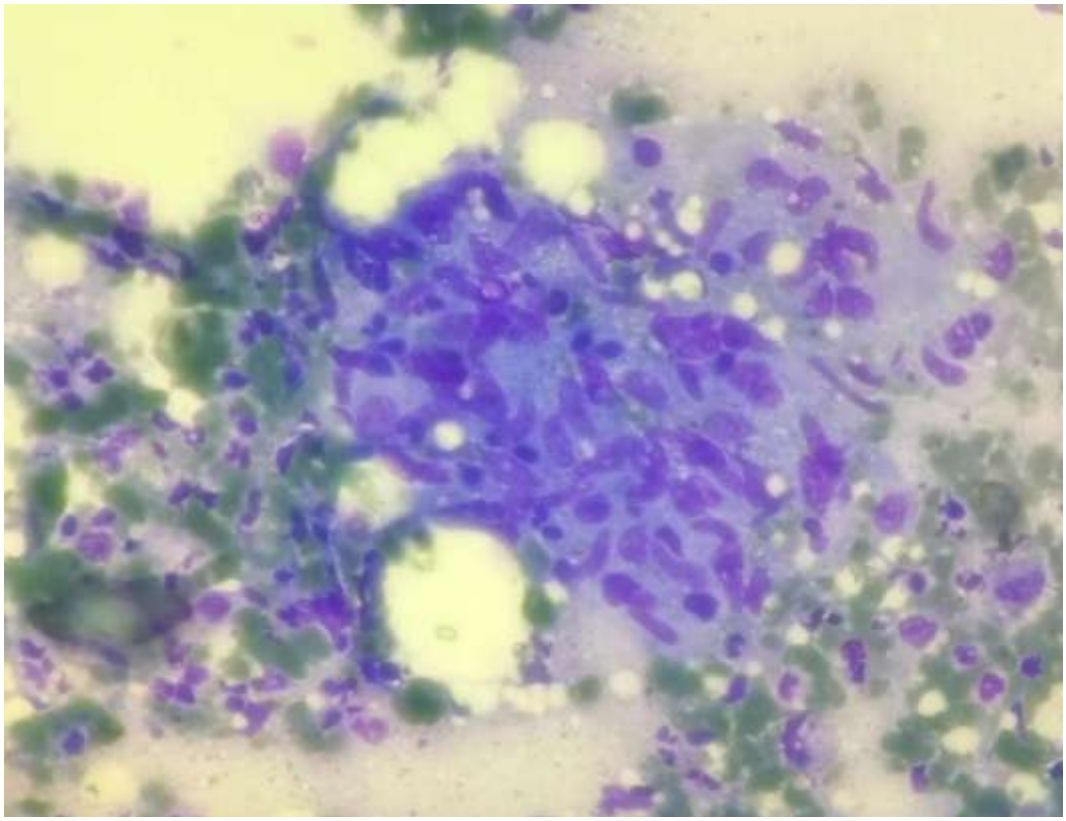

FIGURE 1: MGG Showing epithelioid cells(non necrotizing granuloma) associated with inflammation.

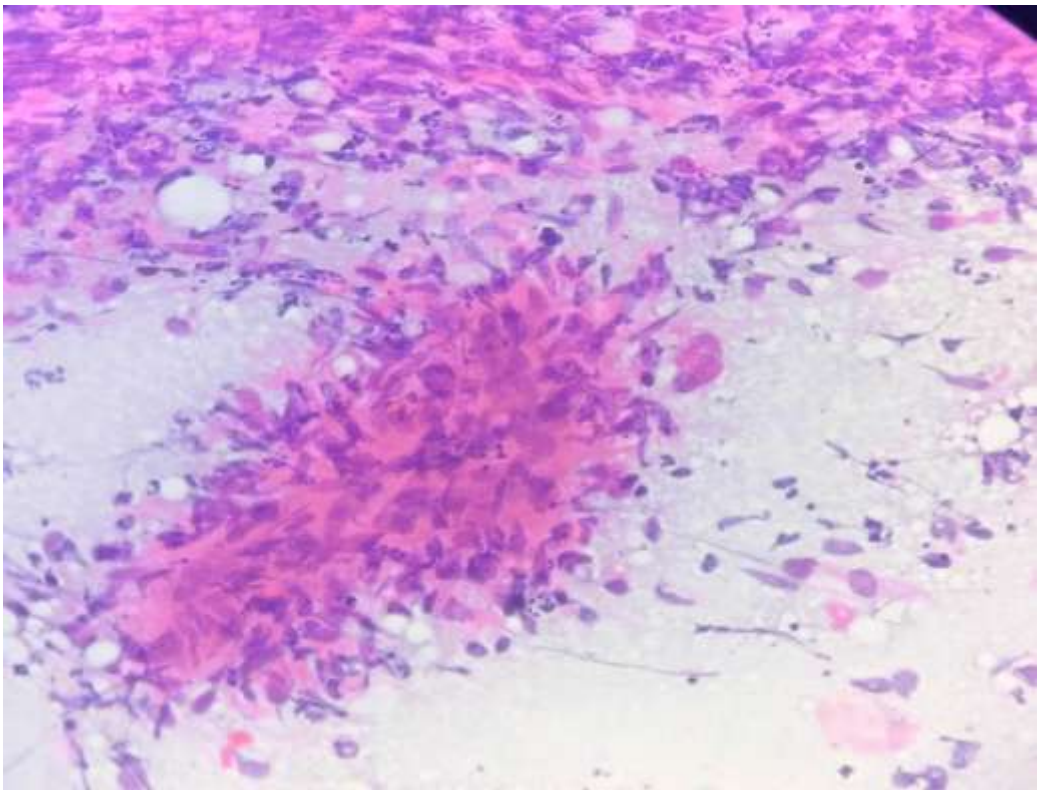

FIGURE 2: PAP Smear showing collection of epitheliod hidtiocytes

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III. DISCUSSION

IGM usually affects childbearing age women however reports of young and old age women have been found.Most women report a history of childbirth and breastfeeding within previous 5 years. True prevalence is unknown It has predilection for Hispanic and asian women.It is an idiopathic condition. Proposed itiological factors include chemical reaction associated with oral contraceptive pills, autoimmune phenomenon, localized immune response to extravasated secretions from lobules and infection with yet unidentified pathogen. Some conditions are associated with increased risk of IGM such as pregnancy, breast feeding, breast trauma and hyperprolactinemia.IGM usually presents with progressive painful breast lump,variable size, firm, tender, ill defined and unilateral. Lesion is present in any quadrant except subareolar region. Axillary lymph nodes are usually not enlarged.It can cause nipple retraction or paeu d orange which mimics malignancy. It can also mimic breast abscess. Chronic IGM can develop fistulae, sterile abscess and nipple inversion.

IGM remains diagnosis of exclusion and its features are non specific.Differential diagnosis includes bacterial mastitis, chronic inflammatory breast disease, mammary duct ectasia, tuberculous or fungal mastitis. FNAC reveals epithelioid histiocytes, multinucleated giant cells, lymphocytes , neutrophils and plama cells. Necrosis is usually abscent.Characteristic histopathology features such as lobular non-caseating granulomas with epitheloid histiocytes, multinucleated giant cells and a predominantly neutrophilic background with attendant lymphocytes, plasma cells and eosinophils in varying numbers without necrosis and negative microbiological investigation favour diagnosis of IGM. Absence of ceseating necrosis and predominant neutrophilic background are important clues favouring IGM diagnosis.The treatment remains controversial. Available options include close follow up, immunosuppressive drugs, and surgical excision.

TGM is a rare clinical entity as mammary tissue offers resistance to survival and multiplication of tubercle bacilli. The cytological features favouring tubercular etiology on FNA include epithelioid cells, lymphocytes, plasma cells and langhans giant cells in a background of caseous necrosis. Demostration of AFB and culture are useful for confirmation and gold standard for diagnosis.

IV. CONCLUSION

IGM and TGM are mimickers of malignancy and have overlapping features.With careful clinical history, radiological findings and specific cytological features on FNAC smears, these entities can be safely distinguished.

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