INTRODUCTION

Granulomatous mastitis (GM) is a rare chronic inflammatory disease of the breast of unknown etiology that was described by Kessler and Woolloch. Clinical features of granulomatous mastitis closely resemble those of tuberculosis and carcinoma of breast. It is commonly present in reproductive age group and frequently associated with pregnancy and lactation. Cytological diagnosis of granulomatous mastitis (GM) is difficult because the features are non-specific and overlap with other etiologies. Histological features include absence of caseation necrosis along with the granuloma formation.

The etiology and pathology of granulomatous mastitis is not clear, but localized immune response to local trauma, local irritants, or viruses are speculated. Use of corticosteroids and surgical excision of the lesion have been reported for the treatment of granulomatous mastitis along with close regular surveillance. The condition is not widely reported in local literature and the entity remains under-considered.

METHODOLOGY

This study included a series of 22 patients, histopathologically diagnosed with granulomatous mastitis, conducted at the Department of Surgery, Dow University of Health Sciences and Tuberculosis Clinic, Bantwa Hospital, Karachi, from January 1999 to January 2009 over a period of 10 years. Patients diagnosed as tuberculosis of breast, non-granulomatous chronic mastitis and carcinoma breast were excluded from the study.

All patients were studied in terms of site, age group, lactating or non-lactating status, history of contraceptive pills use, clinical diagnosis, ultrasound, mammogram and fine needle aspiration cytology (FNAC). All patients were initially given antibiotics and corticosteroid for a period of 10 days. All patients were followed for a period of 6 months. Recurrent cases were managed by wide excision and followed for another period of 6 months without evidence of complications.

ABSTRACT

Objective: To find out the clinical and management profile of granulomatous mastitis (GM).

Study Design: A case.

Place and Duration of Study: This study was carried out at Civil Hospital and Dow University of Health Sciences, Karachi and Tuberculosis Clinic at Bantwa Hospital, Karachi, from January 1999 to January 2009.

Methodology: Histopathologically diagnosed cases of GM were studied. Data included, detailed history, examination, clinical diagnosis, ultrasound, mammogram and fine needle aspiration cytology (FNAC). All patients were initially given antibiotics and corticosteroid for a period of 10 days. All patients were followed for a period of 6 months. Recurrent cases were managed by wide excision and followed for another period of 6 months without evidence of complications.

Results: The mean age of the 22 patients was 37.6 years (range=22-52 years). Right breast was affected in 54.5% and left breast in 45.5% patients. Eighteen (82%) were non-lactating. Patients presented clinically with painful breast lump in 54.5%, painless lump in 45.5% and additional discharging sinuses in 18%. Clinical diagnosis was chronic mastitis in 40.9%, tuberculosis of breast in 36.3% and malignancy in 22.7% patients. Mammography showed an ill-defined mass in 45.5% and asymmetrical density in 31.8%. Diagnosis was confirmed in all patients on histopathology. Recurrence was noted in 2 patients, managed by wide excision, and followed for another period of 6 months without evidence of complications.

Conclusion: GM is an uncommon chronic inflammatory disease of the breast. Usually involving a single non-lactating breast in reproductive age group. It clinically mimics tuberculosis and carcinoma. Mammography remains non-conclusive. Excision and wide excision biopsy are both diagnostic and therapeutic in majority of cases. Treatment includes short course of steroids and antibiotic along with close regular surveillance.

benign look of the tumour clinically. Ultrasound and FNAC was carried out in all patients. But definitive diagnosis was obtained on histopathology either by core, wide excision or excision biopsy. Core biopsy was performed in patients with lump larger than 5 cm. Wide excision in patients with lump up to 5 cm having a clinical impression of malignancy, fixity of skin with lump, hard consistency of lump and nipple retraction. Excision biopsy was done in those patients who had a clinically benign impression, firm consistency and absence of fixity of skin with lump and nipple retraction. All patients were given a short course of antibiotic monotherapy. Co-amoxicillin 625 mg 8 hourly along with prednisolone 20 mg twice a day, daily for a period of 10 days. All patients followed for a period of 6 months to observe recurrence or other complications.

SPSS 10 version was used, to analyze the data to obtain descriptive statistics.

RESULTS

Clinical profile of the cases is shown in Table I. Mean age of the patients was 37.6±9.06 years with range of 22-52 years. Right breast was affected in 54.5% and left breast in 45.5% patients. Most of the patients (90%) were in the reproductive age group. Four patients (18%) were lactating while 81% patients were non-lactating. There was positive history of contraceptive pills use in 31.8%. Patients presented clinically with painful breast lump in 54.5%, painless lump in 45.5% and additionally with discharging sinus in 18%. Clinical diagnosis was chronic mastitis in 40.9%, tuberculosis of breast in 36.3% and malignancy in 22.7% patients. Breast lump was quite hard on examination with mean size of 4.5 cm ranging from 3-8 cm. Nipple retraction and axillary lymphadenopathy was seen in 27.2% patients.

FNAC reported benign appearance in 40.9% patients, inflammatory changes in 45.5% and found inconclusive in 13.6% patients. Ultrasound examination showed hypo-echoic nodular mass in 45.5%, irregular hypo-echoic lesion in 31.8% and mixed hypo-echoic and hyper-echoic lesion in 22.7% patients. Clinical diagnosis was chronic mastitis in 40.9%, tuberculosis of breast in 36.3% and malignancy in 22.7% patients. Breast lump was quite hard on examination with mean size of 4.5 cm ranging from 3-8 cm. Nipple retraction and axillary lymphadenopathy was seen in 27.2% patients.

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DISCUSSION

Granulomatous mastitis (GM) is a rare benign breast disease. Few reports are found in the literature regarding the entity, most being single case reports or case series.7 Suggested etiologies include the possibility of an autoimmune process, damage to the
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Granulomatous mastitis remains the gold standard for the diagnosis. All cannot be confirmed on FNAC. In this study, advocate the role of FNAC in GM where others conclude the role of FNAC in GM is debatable. Some authors without a single conclusive diagnostic picture.

Role of FNAC in GM is debatable. Some authors advocate the role of FNAC in GM where others conclude that various types of chronic granulomatous inflammation can not be confirmed on FNAC. In this study, inflammatory cells were reported in 45.5% patients, benign in 40.9%, while inconclusive finding were stated in 13.6% patients. FNAC is helpful in the diagnosis but not conclusive. The characteristic feature of GM is the presence of neutrophils in the back ground with the absence of caseation necrosis. It should be differentiated from tuberculosis of the breast on histology. The definitive diagnosis of granulomatous mastitis usually made on histology and not on FNAC. Histopathology remains the Gold standard for the diagnosis. All patients in this study were diagnosed on histopathology.

Although it is a benign condition but simulates carcinoma very closely and is difficult to pre-operatively differentiate both clinically and radiologically. Here 41% patients who are suspected of malignancy were confirmed on core biopsy as that granulomatous mastitis. Complete surgical excision is the treatment of choice as seen in this study where 41% patients required surgical treatment. Treatment with steroids is an option, but it is mandatory to exclude infectious causes of granulomatous mastitis before starting the corticosteroid therapy. Tuberculous mastitis is important differential diagnosis of granulomatous mastitis which remains endemic in different region treating tuberculosis with steroid would aggravate the infection and its side effects. Expectant management with close regular follow-up is the preferred policy in equivocal cases. One study showed the role of low oral dose of methotrexate, used in 5 resistance cases after surgery and corticosteroid, withdrawal of corticosteroids was effected without relapse and no side effects of methotrexate were found, hence making it a viable option.

CONCLUSION

GM is a rare chronic inflammatory disease of the breast, resembling tuberculosis and carcinoma breast, both clinically and radiologically. Biopsy is the Gold standard to confirm the diagnosis. Short course of antibiotic and steroids is a better treatment option. Surgery is required in recurrent cases and those who fail on conservative treatment.

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REFERENCES


