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Case Report

Granulomatous mastitis-a challenging surgical entity

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ABSTRACT

Background: Idiopathic granulomatous mastitis is a rare benign breast disease, first described by Kessler and Wolloch in 1972. It is characterized by chronic necrotizing granulomatous lobulitis of unknown aetiology. The objective of the study is to find out the clinical and management profile of granulomatous mastitis (GM). This study was carried out at JSS hospital, Mysore, Karnataka, India during the period 2014-2016.
Methods: 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 followed for a period of 6 months. Recurrent cases were managed by wide excision and followed for another period of 6 months.
Results: 8 patients who were hisptopathologically diagnosed to have granulomatous mastitis were studied. The mean age was found to be 43.5 years. All patients presented with a painless breast lump and were unilateral. The incidence of the same was found to be higher (3.7%) compared to other large volume studies. The best treatment modality with least recurrence in 4 cases was wide local excision and 1 case of quandrantectomy.
Conclusions: 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.

Keywords: Breast, Granulomatous, Mastitis, Mammography

INTRODUCTION

Idiopathic granulomatous mastitis is a rare benign breast disease,first described by Kessler and Wolloch in 1972.[1] It is characterized by chronic necrotizing granulomatous lobulitis of unknown aetiology. Its true prevalence is unknown since it is often a diagnosis of exclusion

The diagnostic dilemma is because of its clinical and radiological picture, which is often non-specific and may mimic a malignant mass.[2] Wide local excision, with or without corticosteroid therapy, has often been used to treat such patients, with a high recurrence rate. In a study by Baslaim et al, histopathologically proven cases of idiopathic granulomatous mastitis were found in 1.8% of 1,106 women with benign breast disease. Although it is seen globally, a higher racial predilection in Latin and Asian women is known.[3] The term granulomatous mastitis is sometimes used as default pathological diagnosis when a pathology specimen from the breast shows a chronic granulomatous inflammatory reaction. Histopathology is essential to solve the dilemma and make a definitive diagnosis, thus avoiding unnecessary mastectomies.

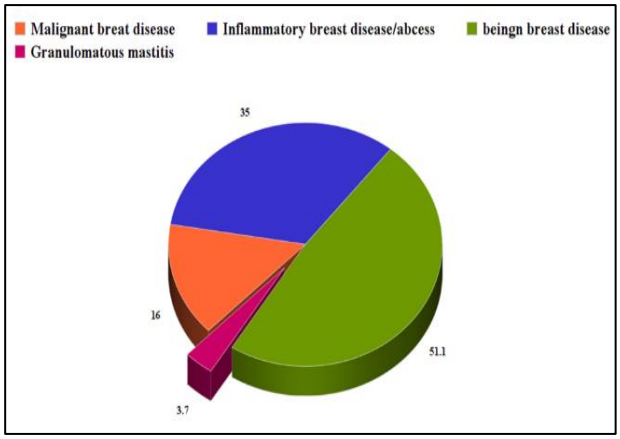

Figure 1: Breast diseases.

METHODS

Out of the 8 cases studied in JSS hospital over a period of two years, all cases presented with history of breast lump with an average duration of 1 month, insidious in onset, gradually progressive, non-tender. One out of the 8 cases had pain with purulent discharge of short duration. Not associated with lactation, no history of Tuberculosis / connective tissue disorders or autoimmune diseases.

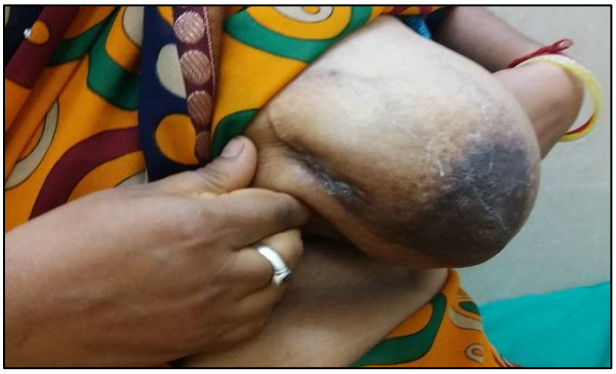

Figure 2: A case of left sided granulomatous mastitis with post-operative recurrence and fistula formation.

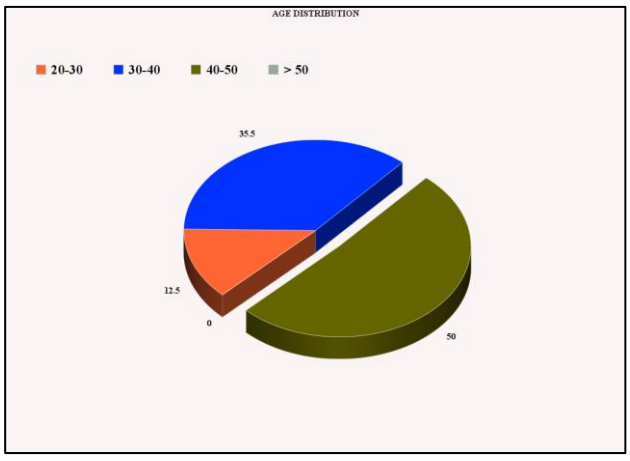

Figure 3: Age distribution.

Radiological investigations

Radiological features of granulomatous mastitis were non-specific. The most common mammographic findings were of an asymmetric density or an ill-defined mass, but findings of multiple small ill-defined masses have also been described. Ultrasound findings: The most common appearance is that of a discrete but irregular hypoechoic mass lesion; however, multiple hypoechoic masses, parenchymal heterogeneity, and area of mixed echogenicity with parenchymal deformity have also been reported. FNAC performed in all 8 patients were inconclusive.

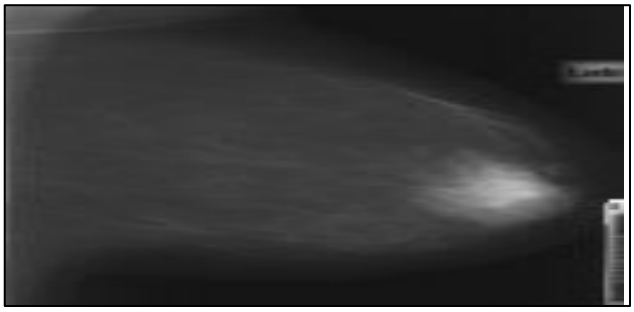

Figure 4. Mammography demonstrates a 5-cm mass lesion in the left retroareolar area (white arrow).

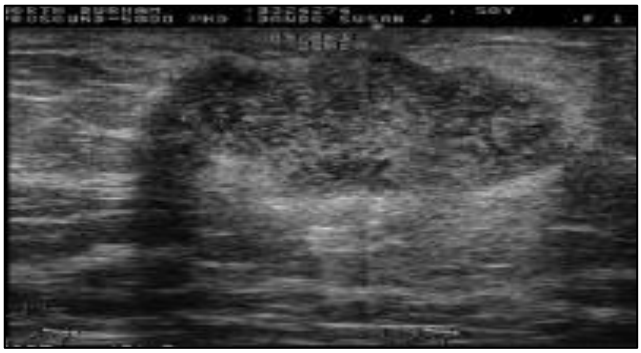

Figure 5: Ultrasound of the lesion (c) confirms a 5.2 cm complex hypoechoic mass lesion.

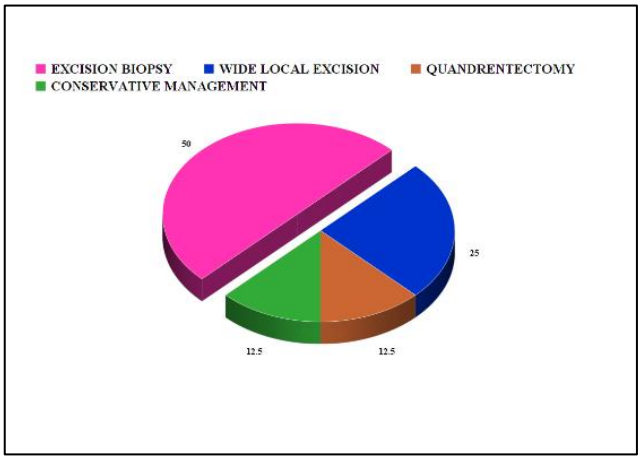

Figure 6: Treatment protocol.

DISCUSSION

The incidence of this condition is uncertain. Until 1999, there were only 120 cases described in the world literature. It is reported to occur predominantly in women of childbearing age and maybe unilateral or bilateral.[4] Correlation between idiopathic granulomatous mastitis and breastfeeding, smoking, and use of the oral contraceptive pill have all been postulated but never proven. The most common presentation is that of unilateral breast mass or breast pain.

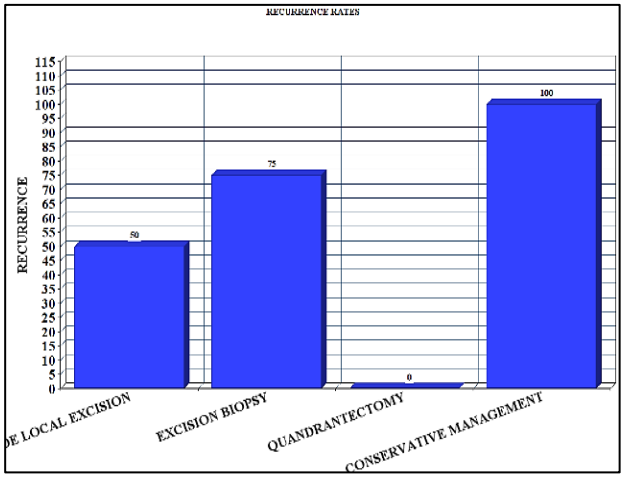

Figure 7: Recurrence rates.

Nipple inversion, axillary lymphadenopathy, and fistula formation are all less common symptomatic presentations.[5] A number of rather large series of cases of granulomatous mastitis have been reported from the developing world, particularly within the last 8 years. This is unusual for what had hitherto been a rare disease.[6]

Many authors have postulated that some of these cases may be a reflection of the underdiagnosis of tuberculous mastitis. The cytomorphic pattern seen in tuberculous mastitis is very similar to that seen in idiopathic granulomatous mastitis.[7] Equally, as it may not always be possible to detect acid-fast bacilli in histological sections of idiopathic granulomatous mastitis, an accurate diagnosis can only be made when clinical information is taken into account.[5] The management of the patients with idiopathic granulomatous mastitis generally consists of wide local excision. Recurrences, fistula formation, and secondary infection are well-documented complications.[4-12] Corticosteroid treatment also has its advocates and has been reported as decreasing the lesion size and improving wound healing.[8]

The salient point with regard to treatment appears to be obtaining a correct pre-operative diagnosis, as it would be completely inappropriate to treat a patient with active infection with corticosteroids, or to deprive a patient with active tuberculosis of anti-tuberculous medication.

CONCLUSION

In conclusion, granulomatous mastitis is an entity which is more prevalent in our community as compared to Western countries. It is a rare inflammatory condition of the breast, which may clinically mimic malignancy and may be misdiagnosed as carcinoma.

In high index of suspicion, pre-operative conclusive diagnosis should be made in order to prevent recurrences (possibly with core needle biopsy). Clearly, effective feedback in the context of a multi-disciplinary team is vital in these challenging cases where the patient's history, as is so often the case in medicine, provides the key to the correct diagnosis. In order to obtain a standardised surgical management of the disease, high volume studies are required.

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