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Original Article

Outcome of Wide Local Excision in Idiopathic Granulomatous Mastitis-A Short Observational Study.

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Abstract

Background: *Idiopathic granulomatous mastitis is a rare disease of the breast. It is a benign inflammatory lesion characterized by lobulocentric granulomas. Clinically and radiologically it may mimic breast carcinoma.1 Awareness of surgeons, pathologists, and radiologists is essential to avoid unnecessary mastectomies.* ***Objective:*** *This study aimed to investigate the outcome of wide local excision in idiopathic granulomatous mastitis.* ***Method:*** *This hospital based prospective study was done in surgery unit of both govt. and private hospitals, Cumilla, Bangladesh. All patients who were diagnosed with idiopathic granulomatous mastitis during the period of July 2020 to July 2022 were included. Informed consent was taken from the patient before invasive procedures including surgery. Data was analyzed using the Statistical Package for Social Sciences version 24.0 wherever appropriate.* ***Result:*** *Among 17 patients no recurrence was observed in 94% patients who were treated with wide surgical excision during the median follow-up period of 12 months.* ***Conclusion:*** *Patients with idiopathic granulomatous mastitis can present with a wide variety of symptoms which mimic other more common conditions. Surgical management in the form of wide local excision appears to provide the best long term outcome in patients with idiopathic granulomatous mastitis.*

Key words: *Granulomatous mastitis, Idiopathic granulomatous mastitis, Breast cancer.*

Introduction: In 1972, Idiopathic granulomatous mastitis (IGM) was first described by Kessler and Wolloch[2] as a rare benign chronic inflammatory breast disease. It is characterized by sterile noncaseating lobulocentric granulomatous inflammation.[2,3] IGM usually has a recurrent or prolonged natural disease course that eventually leads to lesion burnout.[4-6] It usually affects parous premenopausal women with a history of lactation and frequently is clinically associated with hyperpro lactinemia.[7-10] This benign disease may present itself with various clinical findings associated with breast tissue (a palpable mass, nipple retraction, inflammation -erosion on the breast skin and fistulae).[11] IGM can have a wide range of clinical and imaging manifestations;[12] however, the exact cause remains unproven and the diagnosis is usually made by means of exclusion. The most common clinical sign is a palpable tender mass. Clinical and radiologic findings of IGM are noted to frequently overlap with those of breast cancer and several benign inflammatory breast conditions and thus can often lead to delayed treatment and misdiagnosis of the disease. The treatment of IGM is controversial. Use of antibiotics or corticosteroids and wide excision of the affected tissue have been reported as treatment options.13-16 However, there is no consensus about the most appropriate therapy in these patients. The aim of this study was to investigate the clinical course of IGM treated with wide local excision.

Method:

This prospective observational study was conducted in surgery unit of both govt. and private hospitals,

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Cumilla, Bangladesh; during the period of July 2020 to July 2022. All adult women (≥ 18 years old) with inflammatory granulomatous lesions in breast were included in this study. All patients were treated with wide surgical excision for possible inflammatory granulomatous lesions after baseline investigations. After surgical excision every sample was sent for histopathological examination. Observation of noncaseous granulomas during histopathological evaluation is characteristic of the disease and is considered the diagnostic criteria for IGM after other potential infectious causes (such as tuberculosis and certain mycoses) and noninfectious causes (such as sarcoidosis and vasculitis) have been excluded.[17] Total 17 patients were eligible to participate who were diagnosed with IGM histopathologically, if they were able to come to the hospital for monthly examinations, had agreed to participate and had given their written informed consent. Patients were followed up after surgery about 12 months (8-18) months and observed for further recurrence.

Results:

The mean age of patients was 31.4 years (range 20–50 years; SD ± 7.3 years). In 14 patients (82.36%) the main presentation was a breast lump measuring 5 to 10 cm in diameter (mean 6.4 cm). The mass was unilateral in most of the patients. The right breast was affected in 9 cases. The upper outer quadrant was affected in 7 cases. All patients were parous except one of them was a single, 20 years old woman who presented with a hard lump in the right breast. Two patients were pregnant at the time of presentation. The mean number of previous pregnancies was three. Lactation within 6 months of presentation was documented in five patients. There was no previous history of tuberculosis or systemic granulomatosis in any of them. No constant history of oral contraceptive use could be found. Recurrence was observed in 1 of the 17 (5.88%) patients with a follow-up of 12 months (8-18) months.

Table 1 Clinical characteristics of the patients with IGM:

Variable	No	%
Age		
20-30	4	23.53
31-40	7	41.17
41-50	6	35.30
Laterality		
Right	9	52.94
Left	6	35.30
Bilateral	2	11.76
Physical examination		
Mass	14	82.36
Abscess	1	5.88
Fistula	1	5.88
Mass + fistula ± abscess	1	5.88
Total	**17**	**100**

Most of the patients were in 31-40 years age group (41.17%). Right breast was affected more 9 cases (52.94%). Mass was the most frequent presentation in 14 cases (82.36%).

Discussion:

In this study the mean age of the patients was 31.4 years (20-50 years). An institutional experience on IGM by Prasad S et al found the mean age of presentation was 32.67 years, with a range of 23 to 66 years.[18] In this study we found breast lump in 14 (82.36%) cases and abscess, fistula, mass + fistula ± abscess in 1 case each. The most common presenting symptom of patients with IGM was found to be a painless lump (61.64%) in the breast.[18] IGM patients usually present with complaints of a hard breast mass and sometimes of pain, warmth, and a fistula at the site.[19] In this study no recurrence was observed in 16 (94.12%) patients with a follow-up of 12 months (8-18) months. In a study conducted by Elzahaby IA et al to assess the surgical approach in IGM during an 18-month period; experienced rapid recovery in 93% of patients without any recurrence.[20]

Limitations:

1. Small sample size.
2. Short duration of study.
3. Single surgeon observation.
4. Multi centered histopathologycal examination.

Conclusion:

In conclusion, wide local excision may be recommended as the first-line therapy for IGM. We believe that before larger-scale and more comprehensive multi- model, multi-year studies are undertaken, such a first order study can provide invaluable information in the planning of future research projects.

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Recommendation:
Long durable multi centered large sample study can justify the outcome.

Author's Contributions:
All the authors were contributed in various parts of the publication from concept and design, acquisition of data, analysis & interpretation of data and drafting of the manuscript.

Declaration of Conflicts:
The authors declare that, there is no conflict of interest regarding the publication of this article.

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