

# Idiopathic Granulomatous Mastitis of Breast and its Management: A Case Report

Ipsita Dhal<sup>1</sup>, Rohani Nayak<sup>2</sup>, Tapan Kumar Sahoo<sup>3</sup>, Swagatika Samal<sup>4</sup>, Subrat Samantara<sup>5</sup>

<sup>1</sup>Post-graduate, Department of Pathology, Shrirama Chandra Bhanj Medical College, Cuttack, Odisha, India, <sup>2</sup>Post-graduate, Department of Gynaecology, Sriram Chandra Bhanja Medical College, Cuttack, Odisha, India, <sup>3</sup>Senior Resident, Department of Radiation Oncology, All India Institute of Medical Sciences, Bhubaneswar, Odisha, India, <sup>4</sup>Post-graduate, Department of Pathology, Pt. BD Sharma Post Graduate Institute of Medical Sciences, Rothak, Haryana, India, <sup>5</sup>Assistant Professor, Department of Surgical Oncology, Acharya Harihara Regional Cancer Centre, Cuttack, Odisha, India

## Abstract

Idiopathic granulomatous mastitis is a rare inflammatory disease of the breast with unclear etiology. It commonly occurs in the child bearing age. It is a diagnosis of exclusion, and it is necessary to exclude all the infectious and non-infectious granulomatous conditions. There are no standard therapeutic guidelines due to the rarity of the disease. Here, we report a case of granulomatous mastitis of left side breast with history of bilateral multiple fibroadenomas in a 38-year-old women. The case was treated with oral corticosteroids for a period of 4 months with good response. Wide local excision was performed. The patient is on regular follow-up since 13 months after surgery without any recurrence.

**Key words:** Breast, Granulomatous mastitis, Idiopathic, Management

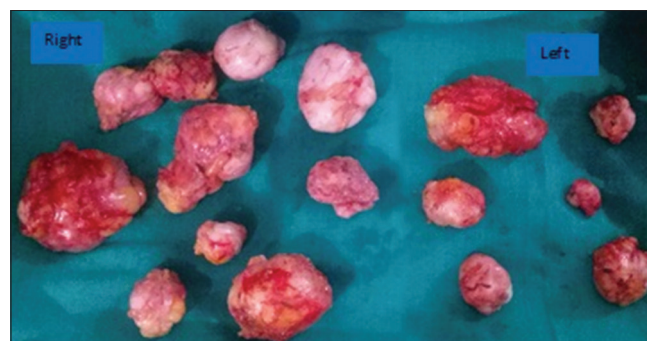
## INTRODUCTION

Idiopathic granulomatous mastitis (IGM) is a rare inflammatory disease of the breast with unclear histology.<sup>1</sup> It was first described by Kessler and Wollock in 1972.<sup>2</sup> IGM most commonly occurs in the child bearing age or with a history of oral contraceptive use.<sup>2</sup> It most commonly presents as a unilateral breast mass. Up to 25% of cases can involve both breasts.<sup>1</sup> IGM may be a self-limiting condition.<sup>1</sup> It may persist for a range of 2-24 months, but chronic conditions may last for several years.<sup>3</sup> We report a case of IGM in a 38-year-old women.

## CASE REPORT

A 38-year-old woman was presented with multiple bilateral breast nodules since 20 years back. There was no history of breast trauma, family history of cancer, oral contraceptive or estrogen use, tuberculosis or nipple discharge. The

medical and surgical history was unremarkable. She reported breast feeding to two of her children 3½ years back. Ultrasound revealed multiple nodules in the breast and all are radiologically suspected as fibroadenomas. Tru-cut biopsy from the larger one revealed fibroadenoma. Bilateral excision of the nodules was done. Gross examination showed multiple rounded to oval masses largest of size 4 × 5 cm and smooth in surface (Figure 1) cut section was solid, nodular with presence of clefts. Histopathological examination revealed fibroadenoma. She was on regular follow up since then, and found to have a lump in the upper outer quadrant of left breast after 2 years. Tru-cut biopsy of the lump was done and Histopathological examination revealed features of granulomatous mastitis. The case was treated with oral



**Figure 1:** Multiple rounded masses with glistening smooth outer surface

Access this article online



www.ijss-sn.com

Month of Submission : 12-2014  
Month of Peer Review : 01-2015  
Month of Acceptance : 01-2015  
Month of Publishing : 02-2015

**Corresponding Author:** Tapan Kumar Sahoo, Department of Radiation Oncology, All India Institute of Medical Sciences, Bhubaneswar-751019, Odisha, India. Phone:+91-9437219525, E-mail: drtapankumars8@gmail.com

corticosteroids for 4 months, and the size of the lesion was reduced. Wide local excision was done and gross examination showed two inflammatory masses with red, granular surface, approximately one of size 4 cm × 4 cm and another of size 2 cm × 2 cm (Figure 2). Histopathological examination revealed granulomatous mastitis (Figures 3 and 4). She was now kept under regular follow-up, and there is no recurrence of the disease in a gap period of 13 months.

## DISCUSSION

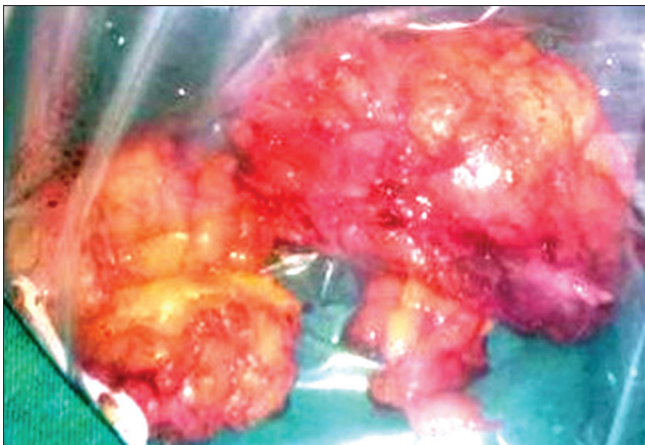
IGM is a diagnosis of exclusion and it is necessary to exclude all the infectious and non-infectious granulomatous conditions.<sup>4</sup> Presence of chronic granulomatous inflammation of lobules without necrosis is the pathological characterization of IGM.<sup>5</sup> Though it is a benign, clinico-radiologically it is confused with breast cancer.<sup>6</sup> For the diagnosis of GM, exclusion of breast cancer and other infective or non-infective causes of granulomatous inflammation such as, tuberculosis, sarcoidosis,

Wegener's granulomatosis, fungal and parasitic infections, polyarteritis nodosa, etc., should be done.<sup>3,7</sup> The present case ruled out other infectious conditions. Extravasations of protein and fat-rich secretions from damaged mammary ducts into the lobular connective tissue cause a localized immune response and it may be a proposed mechanism for granulomatous inflammation.<sup>7,8</sup> If initial presentation suggests infectious mastitis, different antibiotics are frequently used. After no response to antibiotics, different etiologies are suspected. Therefore, a high degree of suspicion in the early course of the disease is necessary for the proper diagnosis.

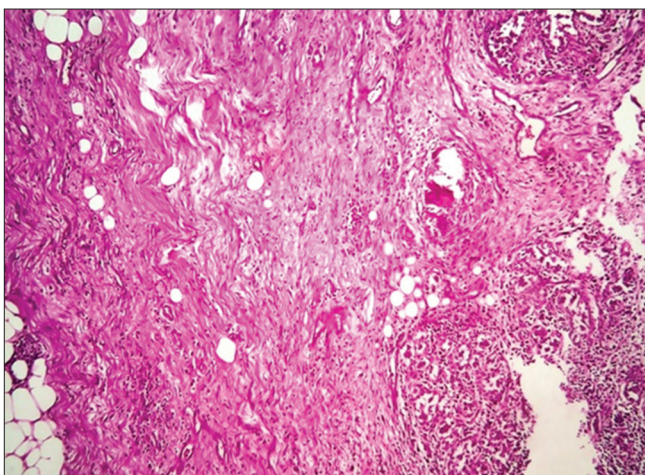
Ultrasound, mammogram, tru-cut biopsy, core needle aspiration biopsy and non-contrast MRI are helpful in diagnosis. Tru-cut biopsy is necessary for the diagnosis.<sup>9</sup> Histopathological examination needs for the diagnosis and presence of non-caseating granulomatous lobulitis ruled out other granulomatous diseases. Histopathological examination shows non-caseating granulomatous lobulitis, giant cells, leucocytes, epithelioid cells and macrophages.

The present case had a history of multiple fibroadenomas of bilateral breast since childhood. Relation between fibroadenomas and IGM is nowhere mentioned in the literature. The case was operated for multiple fibroadenomas 2 years back and develops a mass lesion in left side breast. There is no symptom or sign of infection between the gap periods. Whether there is any association between fibroadenoma and IGM needs further evaluation.

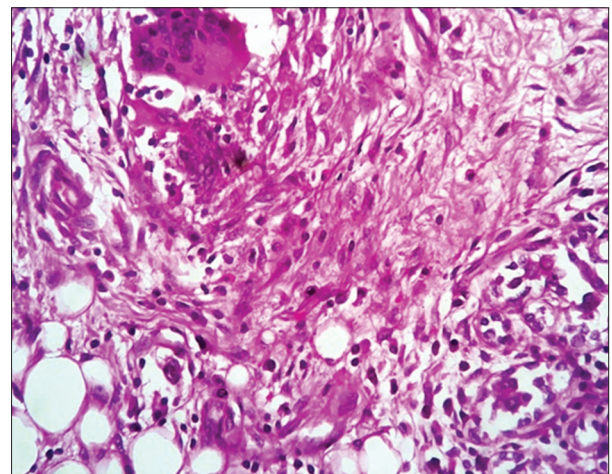
IGM is a diagnostic and therapeutic dilemma mimicking some other conditions. Clinical presentation usually mimics breast abscess or breast cancer.<sup>3</sup> The present case on histopathological examination shows features of granulomatous mastitis.



**Figure 2: Two reddish masses with high vascularity and granular surface**



**Figure 3: Wide and unevenly spaced lobules of breast acini separated by fibrofatty stroma along with many granulomas in the breast parenchyma (H and E, ×400)**



**Figure 4: Microsection showing breast lobule (right lower field) surrounded by numerous inflammatory cells. Upper field shows a granuloma containing many multinucleated giant cells, clusters of epithelioid cells and inflammatory cells (H and E, ×400)**

There is no definitive treatment till date. Initial treatment varies widely either surgical or non-surgical. Corticosteroids, immunosuppressant, antibiotics, abscess drainage and surgical excisions are treatment options in IGM. IGM is generally a self-limiting condition, and uncomplicated cases can be safely observed without any treatment.<sup>3</sup> Current data shows that initial treatment should be a course of corticosteroids when treatment is necessary. In persistent cases, more immunosuppressive is necessary like methotrexate or azathioprene. In unresponsive cases, recurrence or cases complicated by abscess formation requires surgical interventions.<sup>10</sup> Treatment with corticosteroids prior to surgery significantly reduces inflammation allowing more conservation surgery.<sup>8</sup> Once infectious etiology is ruled out, oral steroid therapy should be started.<sup>1</sup> The present case received 4 months course of oral corticosteroids with good response and followed by wide local excision.

## CONCLUSION

IGM is a rare inflammatory breast disease with high index of suspicious is necessary for the diagnosis. Association between fibroadenoma and IGM is not known and needs further evaluation. Before treatment biopsy should be done, and careful histopathological examination is necessary to rule out invasive breast cancer. Furthermore, it needs to

rule out infectious etiology. Due to the absence of clear understanding about the disease, treatment will remain challenging.

## REFERENCES

1. Erozgen F, Ersoy YE, Akaydin M, Memmi N, Celik AS, Celebi F, *et al.* Corticosteroid treatment and timing of surgery in idiopathic granulomatous mastitis confusing with breast carcinoma. *Breast Cancer Res Treat* 2010;123:447-52.
2. Kessler E, Wolloch Y. Granulomatous mastitis: A lesion clinically simulating carcinoma. *Am J Clin Pathol* 1972;58:642-6.
3. Al-Khaffaf B, Knox F, Bundred NJ. Idiopathic granulomatous mastitis: A 25-year experience. *J Am Coll Surg* 2008;206:269-73.
4. Patel RA, Strickland P, Sankara IR, Pinkston G, Many W Jr, Rodriguez M. Idiopathic granulomatous mastitis: Case reports and review of literature. *J Gen Intern Med* 2010;25:270-3.
5. Going JJ, Anderson TJ, Wilkinson S, Chetty U. Granulomatous lobular mastitis. *J Clin Pathol* 1987;40:535-40.
6. Hovanessian Larsen LJ, Peyvandi B, Klipfel N, Grant E, Iyengar G. Granulomatous lobular mastitis: Imaging, diagnosis, and treatment. *AJR Am J Roentgenol* 2009;193:574-81.
7. Ocal K, Dag A, Turkmenoglu O, Kara T, Seyit H, Konca K. Granulomatous mastitis: clinical, pathological features, and management. *Breast J* 2010;16:176-82.
8. Konan A, Kalyoncu U, Dogan I, Kiliç YA, Karakoç D, Akdogan A, *et al.* Combined long-term steroid and immunosuppressive treatment regimen in granulomatous mastitis. *Breast Care (Basel)* 2012;7:297-301.
9. Imoto S, Kitaya T, Kodama T, Hasebe T, Mukai K. Idiopathic granulomatous mastitis: Case report and review of the literature. *Jpn J Clin Oncol* 1997;27:274-7.
10. Mazlan L, Suhaimi SN, Jasmin SJ, Latar NH, Adzman S, Muhammad R. Breast carcinoma occurring from chronic granulomatous mastitis. *Malays J Med Sci* 2012;19:82-5.

**How to cite this article:** Dhal I, Nayak R, Sahoo TK, Samal S, Samantara S. Idiopathic Granulomatous Mastitis of Breast and its Management: A Case Report. *Int J Sci Stud* 2015;2(11):222-224.

**Source of Support:** Nil, **Conflict of Interest:** None declared.