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Study of Granulomatous Mastits and it's Management

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Abstract

Background: This is a retrospective study aimed at evaluating patients presenting with Granulomatous Mastitis at Dr.D.Y. Patil Medical College, Pimpri, Pune. Affiliated to be Deemed University Dr. D.Y. Patil Vidyapeeth, Pune. It outlines various clinical patterns in Granulomatous mastitis; this includes age, type of presentation and side. *Methods*: A retrospective study was conducted at Dr. D.Y. Patil Medical College, Pimpri, Pune, between May 2015 to March 2018. We evaluated 20 patients, female, of all ages, presenting with complaints suggestive of a Granulomatous mastitis. *Results*: The mean age of incidence of Granulomatous mastitis was 35.85 years. Among 20 patients 10 of them presented with lump (50%), 7 presented with Mastitis (35%), 3 presented with breast abscess (15%). The Right breast (60%) was noted to be more commonly involved than the Left breast (40%). *Conclusions*: Granulomatous mastitis presents in a certain age group and follows a certain clinical pattern as outlined in this study. Detailed history taking and clinical examination while keeping in mind these clinical patterns, along with ultrasound and FNAC (triple test), aids in establishing the diagnosis. Hence, the anxiety caused by breast lumps and nodularity can be releived by excluding the diagnosis of carcinoma breast.

Keyword: Breast, Granulomatous Mastitis.

Introduction

The term granulomatous mastitis was introduced by Veyssiere et al. in 1967 who were the first team to describe idiopathic Granulomatous mastitis. From the viewpoint of clinical features, histology and progression, it was truly established as an individual entity by Kessler and Wolloch in 1972 [1].

Granulomatous mastitis is a rare chronic inflammatory disease of the breast that can clinically mimic breast carcinoma.[1]First described on 1972. Granulomatous changes occur around lobules and ducts of the breast in the absence of specific infection, trauma, or evidence of sarcoidosis [2]. The etiology of granulomatous mastitis is not clear, and the diagnosis is made by exclusion, Granulomatous Mastitis can be a heterogeneous disease with variable clinical presentations [3].

Patients usually present with progressive onset of a breast lump. The most common clinical presentation is a firm unilateral, discrete breast mass, often associated with an inflammation of the overlying skin. Nipple retraction and even a sinus formation are present. Regional lymphadenopathy may be present in up to 15% of cases.

Etiology includes Infections, Duct ectesis, Autoimmune process, Diabetes Mellitus, Sarcoidosis, Fat necrosis or Idiopathic.

Infections might be by Mycobacterium Tuberculosis, Blastomycosis, Histoplasmosis, Actinomycosis, Filarial Infection, Corynebacterium. Autoimmune processes like Wegner granulomatosis, Giant cell arteritis, Foreign body reaction. Duct ectesis like Plasma cell mastitis, Subareolar granuloma, periductal mastitis [4].

Methods

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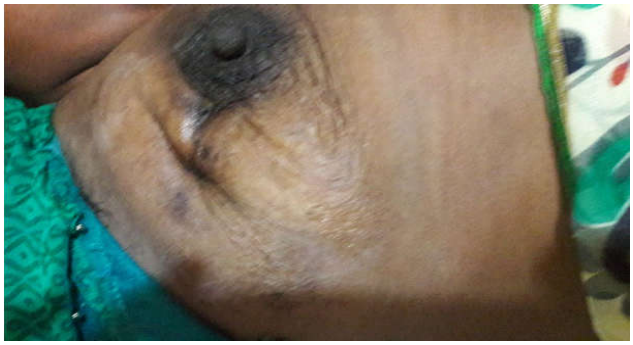

Fig. 1: Granulomatous mastitis right breast

The study was carried out in Dr. D.Y. Patil Medical College, Pimpri,Pune between May 2015 to March 2018. We reviewed patients who fit the histologic criteria of Granulomatous Mastitis of noncaseating granulomas centered on lobules, with or without associated microabscesses. Patients were included in the study when all other possible causes of granuloma formation were excluded. The diagnosis was confirmed by either Fine needle aspiration cytology (FNAC) or excisional biopsy, or also from biopsy specimens taken from the abscess wall during drainage. All slides were examined with hematoxylin-eosin and specific stains, such as Gram, Ziehl-Neelsen, and periodic acid–Schiff. All of the cases were reviewed by a pathologist. In total, 20 cases of Granulomatous Mastitis were identified, and their incidence. To confirm the difference in clinical course between Granulomatous Mstitis patients and other inflammatory breast disease patients, a retrospective review of the clinical database was also performed for the same period to identify patients with symptoms similar to these granulomatous mastitis patients, according to the first diagnosis as "mastitis" or "breast abscess." We identified 175 cases, including 20 granulomatous mastitis cases. Clinical data on the presentation, histopathology, management, and outcome of these patients were analyzed by review of medical records. Follow-up information was obtained from clinical reviews. The types of symptoms, severity, and duration were documented. The data that were collected were then studied and the various parameters were compared.

Symptoms and Diagnosis

Patients mostly present with a hard lump in one breast without any sign of a systemic disease. Other possible symptoms include nipple retraction, pain, inflammation of the overlying skin, nipple discharge, fistula, enlarged lymph nodes, in rare case peau d'orange-like changes. Presentation is mostly unilateral although a significant share of cases is bilateral, also in many cases contralateral or bilateral recurrences were documented.

Characteristic for idiopathic granulomatous mastitis are multinucleated giant cells and epithelioid histiocytes forming non-caseating granulomas around lobules. Often minor ductal and periductal inflammation is present. The lesion is in some cases very difficult to distinguish from breast cancer and other causes such as infections (tuberculosis, syphilis, corynebacterial infection, mycotic infection), autoimmune diseases (sarcoidosis, granulomatosis with polyangiitis), foreign body reaction and granulomatous reaction in a carcinoma must be excluded [5].

Results

Age and clinical presentation have been shown in table 1.

The mean age of Granulomatouos mastitis was 35.85 years.

Table 1:

Case No.	Age	Parity	Presentation
1.	29	1	Mastitis left breast
2.	37	3	Lump in right breast
3.	35	2	Lump in right breast with axillary lymph node
4.	45	2	Mastitis right breast
5.	26	1	Breast abscess right breast
6.	48	3	Lump in left breast
7.	29	2	Mastits left breast
8.	32	2	Lump in right breast
9.	46	3	Lump in right breast with axillary lymph node
10.	25	0	Mastitis left breast
11.	39	2	Lump in left brest
12.	42	3	Breast abscess right breast
13.	24	1	Mastitis left breast
14.	27	0	Lump in right breast
15.	45	4	Lump in right breast
16.	43	2	Mastitis right breast
17.	41	3	Mastitis left breast
18.	28	2	Lump in right breast
19.	44	2	Lump in right breast
20.	32	1	Left breast breast abscess

Table 2: Treatment given to patients

Case Number	Presentation	First line of treatment	Second Line of Treatment
1.	Mastitis left breast	Antibiotics	
2.	Lump in right breast	Antibiotics	Steroid therapy
3.	Lump in right breast with axillary lymph node	Lumpectomy	Antibiotics
4.	Mastitis right breast	Antibiotics	
5.	Breast abscess right breast	Incision and drainage	Antibiotics
6.	Lump in left breast	Lumpectomy	
7.	Mastits left breast	Antibiotics	Steroids
8.	Lump in right breast	Antibiotics	
9.	Lump in right breast with axillary lymph node	Antibiotics	Steroids
10.	Mastitis left breast	Antibiotics	
11.	Lump in left brest	Antibiotics	Steroids
12.	Breast abscess right breast	Incision and Drainage	Antibiotics
13.	Mastitis left breast	Antibiotics	
14.	Lump in right breast	Antibiotics	Steroids
15.	Lump in right breast	Lumpectomy	
16.	Mastitis right breast	Antibiotics	
17.	Mastitis left breast		
18.	Lump in right breast	Antibiotics	Steroids
19.	Lump in right breast	Lumpectomy	
20.	Left breast breast abscess	Incision and Drainage	Antibiotics

Among 20 patients 10 of them presented with lump (50%), 7 presented with Mastitis (35%), 3 presented with breast abscess (15%).

Granulomatous mastitis affecting the right breast was 12. Granulomatous mastitis affecting the left breast was 8.

Granulomatous mastitis involving right breast 60%

Granulomatous mastitis involving left breast 60%

In treatment of Granulomatous mastitis antibiotics like Tinidazole, Ornidazole, Doxycycline, Clarythromycine were used either single antibiotics or antibiotics in combination. (Table 2).

In steroid therapy Tab. Wysolone 8 mg TDS was given for 10 days followed by BD dose for 10 days followed by OD dose for 10 days. Use of steroids showed a sppedy recovery of the patients suffering from Granulomatous mastitis.

Lumpectomy was done only in the patients where FNAC was inconclusive.

Incision and Drainage was done only in patients who came with breast abscess.

Discussion

Granulomatous Mastitis is a rare clinical situation of breast affecting young women during reproductive period, which mimics breast cancer in clinical evaluations, imaging studies and even in pathological features [6].

Local or systemic irritants as well as undetected infective causes may result in damage to the ductal epithelium. Luminal fat and protein rich secretion into the lobular connective tissue produces a localized granulomatous response [7,8].

Granulomatous mastitis can be treated conservatively with the help of use of long term antibiotics either I combination or single antibiotics or antibiotics followed by steroid therapy. In cases which are histopathologically proved to be granulomatous mastitis. In cases which mimic carcinoma in elderly patients and histopathological examination is inconclusive we preffered to go ahead with a mastectomy.

Satisfactory results have been reported with high dosages of prednisone (60 mg/d for 2–3 weeks) [9,10]; however, the recurrence rate can be as high as 50% [10]. Sakurai et al. reported a series of 8 patients with granulomatous mastitis.

Al-Khaffaf et al. [11] reported that 18 cases of GM spontaneously resolved in 11 to 105 weeks, regardless of the treatment used.

Referances

1. Kessler E, Wolloc Y. Granulomatous mastitis: a lesion clinically simulating carcinoma. Am J Clin Pathol 1972;58: 642-6 [PubMed].
2. Inflammatory and reactive tumors. In: Rosen PP. Rosen's Breast Pathology. 3rd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2009.pp.33–70.
3. Baslaim MM, Khayat HA. Al-Amoudi SA. Idiopathic granulomatous mastitis: a heterogeneous disease with variable clinical presentation. World J Surg. 2007;31(8): 1677–1681.
4. Sevgi Bakaris,Granulomatous mastitis including breast tuberculosis and idiopathic lobular granulomatous

mastitis,Can J Surg. 2006 Dec;49(6):427–30, PMCID: PMC3207550, PMID: 17234073.

5. Lin C.H., Hsu C.W., Tsao T.Y., Chou J. Idiopathic granulomatous mastitis associated with risperidone-induced hyperprolactinemia. Diagnostic Pathology. 2012;7(1):2. doi:10.1186/1746-1596-7-2. PMC 3261802/ .PMID 22221904.
6. Akbari ME, Lotfolahzadeh S, Nafissi N, Akbar A, Khayamzadeh M. Non-surgical Management in Idiopathic Granulomatous Mastitis. J Women's Health Care 2014;3:187. doi:10.4172/2167-0420.1000187.
7. Al-Khaffaf B, Knox F, Bundred NJ. Idiopathic granulomatous mastitis: a 25-year experience. J Am Coll Surg. 2008;206:269–73.
8. 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.
9. Sakurai K, Fujisaki S, Enomoto K, Amano S, Sugitani M. Evaluation of follow-up strategies for corticosteroid therapy of idiopathic granulomatous mastitis. Surg Today. 2011;41(3):333–37.
10. Azlina AF, Ariza Z, Arni T, Hisham AN. Chronic granulomatous mastitis: diagnostic and therapeutic considerations. World J Surg. 2003;27(5):515–18.
11. Al-Khaffaf B, Knox F, Bundred NJ. Idiopathic granulomatous mastitis: a 25-year experience. J Am Coll Surg. 2008;206(2):269–73.