

Misdiagnosis IGM with Breast Abscess: A Case Report

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Abstract Idiopathic granulomatous mastitis (IGM) is an uncommon chronic inflammatory lesion of the breast, which is sometimes misdiagnosed as breast cancer or breast abscess. We present a 30-year old woman who came to our clinic with a recurrent and multiple abscesses in her left breast. After twice incision and drainage of the abscess, and after pathologic diagnosis of IGM, she was treated with prednisolone and responded dramatically.

Keywords: idiopathic granulomatous mastitis, breast abscess, tuberculous mastitis

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1. Introduction

Idiopathic granulomatous mastitis (IGM) is an uncommon chronic inflammatory lesion of the breast [1] that simulates the clinical and radiological characteristics of breast cancer [2,3] and was first described by Kessler and Wolloch [4]. IGM is characterized pathologically by chronic granulomatous inflammation of the lobules with suppurative necrosis [5]. It usually affects women of childbearing age or those with a history of oral contraceptive use [4]. Our purpose of writing this paper is to recall and to consider IGM in recurrent breast abscess.

2. Case Presentation

A 30 years old woman was referred to our clinic due to pain, swelling and redness of the left breast, which gradually increased since 2 months ago (Figure 1).

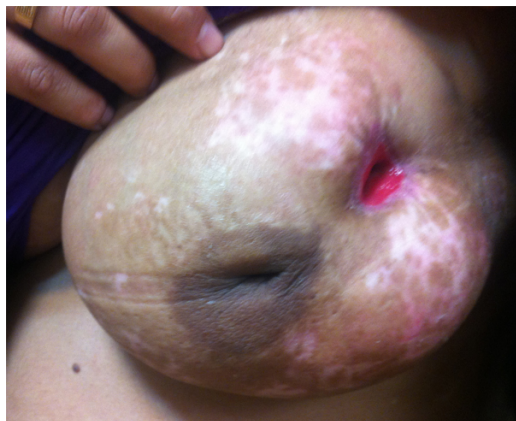


Figure 1. Swelling and redness of the left breast, which gradually increased since 2 months ago

The patient had a history of breastfeeding 3 years ago and she had taken OCP (oral contraceptive) for 7 months. She was suffering from vitiligo and received phototherapy. In physical examination, the superior-lateral part of left breast was red, swollen and painful in palpation. No discharge from the nipple was detected. For further evaluation, ultrasonography of the swollen area was performed which showed a hypo-echo mass with mixed inner echogenicity in the left breast at 3 O'clock near the areola with a small amount of liquid in it. The size of the mass was 5.5 cm in diameter; an 1.1cm axillary lymphadenopathy was simultaneously detected.

A diagnosis of breast abscess was made, incision and drainage of the area was performed and antibiotics administered. A week later she returned with pain and swelling of the same breast and a painful mass was detected near the previous incision. Another ultrasonography of breast showed a hypo-echoic abscess below the previous incision with an axillary lymphadenopathy 8 x 21mm in diameter, suggestive for reactive lymphadenopathy. To Rule out malignancy, a wedge resection of the mass was taken. Which the presence of PMN and PUS indicated granulomatous mastitis (Figure 2).

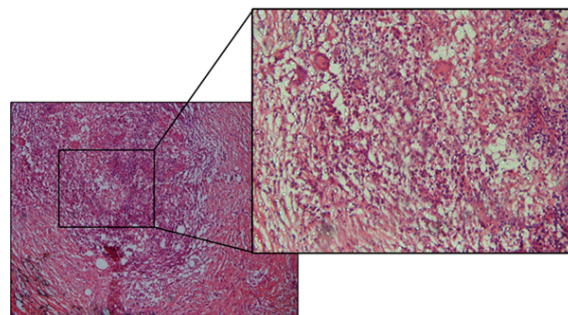


Figure 2. Micrograph of left breast tissue. Pathologic study of tissue in idiopathic granulomatous mastitis shows concentric mixed inflammation

of the ducts and lobules, with suppurative necrosis as well as granulomatous reaction

Indirect smear of abscess drainage, a few Gram-positive cocci were observed, but the culture was negative. Acid-fast staining of drainage secretions was also negative, tuberculin skin test was negative and there was no evidence of active tuberculosis in chest x-ray.

Patient was finally diagnosed as granulomatous mastitis and was treated with prednisolone 60 mg daily, and the dosage of prednisolone was tapered after 28 days. She is now being followed up (Figure 3).



Figure 3. Image of left breast after 28 days of treatment with prednisolone

3. Discussion

Granulomatous lobular mastitis is a rare chronic inflammatory disease that mimics breast cancer clinically and may be approached like a cancer [6]. The most common symptoms are mass and pain that usually involves one breast except for the subareolar area. Physical examination may show abscess formation, fistula tract to skin, and nipple inversion. Axillary lymphadenopathy, with or without skin erythema is also commonly seen [1,7]. The most common presentation is unilateral subareolar abscess or breast pain. Our patient was first treated as an abscess, but did not respond to treatment. Keeping in mind a malignant disease as a differential diagnosis.

Young women under 50 years old, pregnancy, lactation and oral contraceptives, local irritants, viruses, mycosis, parasites infections, hyperprolactinemia, diabetes mellitus, smoking and alpha-1 antitrypsin deficiency, have been considered as etiologic factors, but an autoimmune reaction is most favored. However, it also is reported that it appears to have no association with breast-feeding, smoking, or any hormonal treatment. Most also agree that infective causes are unlikely. Maybe there is a relation between IGM and IgG4 related autoimmune syndromes, but tests for antinuclear antibody and rheumatoid factors are usually negative [1,3,8,10].

For diagnosis of IGM, physical examination, ultrasonography, mammography, fine needle aspiration may not be enough and histological examination of the mass was recommended to rule out the malignancy [1,2,7,9]. Histology of IGM is characterized by

necrotizing chronic granulomatous lobulitis and abscess formation composed of giant cell, accompanied by lymphocytes, neutrophils, plasma cells [1] and clusters of epithelioid histiocytes in which no microorganism are identified. This diagnosis requires exclusion of other granulomatous lesions. The differential diagnosis of this clinical presentation includes infection by bacteria, mycobacteria and fungi; autoimmune process like Wegener, giant cell arteritis, foreign body reaction, duct ectasia, fat necrosis and the most important differential diagnosis is tuberculosis mastitis.

IGM patients are younger and have more mastalgia. Axillary lymphadenopathy, more common in TB, might reflect tuberculosis mastitis. Accurate diagnosis can safely be made only when additional clinical data are present. The main pathologic feature differentiating IGM from tuberculosis mastitis is the presence of caseation necrosis [7,8].

In radiological assessment of IGM, focal asymmetric density can be seen in mammography, and ultrasonography may reveal irregular hypo echoic mass [1,2,3,7,10].

Corticosteroid therapy has been shown to be efficacious for IGM, but abscess formation, fistulae and persistent wound infection should be treated surgically. The recurrence rate range between 5.5-50% after excision and incision and drainage alone is associated with a high rate of recurrence. Antibiotic therapy is not enough treatment. Corticosteroid therapy is recommended for at least 6 weeks, and continued until complete remission. Standard therapeutic dose is 16 mg prednisolone twice a day for 2 weeks and thereafter the dose was slowly tapered and therapy stopped 2 month later .If prednisolone therapy fails, the second course of steroid is repeated as described, if minimal or no improvement is seen, consider adding methotrexate 10 mg/week. Recurrence needs long-term low-dose steroid with or without MTX and local excision. The patient should monthly examine the patient until symptoms have resolved. Ultrasonography is performed at 3 month interval after the start of treatment and earlier if there is no improvement. Once symptoms have resolved 6-month follow up ultrasound is performed [1,3,7,8,10].

4. Conclusion

IGM is an autoimmune inflammatory lesion of the breast that tends to occur in young women and the mean age at 37.2 years. Standard treatments consist of surgery and corticosteroids alone or in combination. In 50% of persons the lesions regress spontaneously but can take over a year, followed by significant shrinking of the breast [4,7,8].

In our case, after rule out malignancy we do standard therapy for her. After use of the prednisolone, lesion became healed and there is no need to second steroid therapy or further MTX therapy, now we follow our patient with monthly examination and ultrasonography.

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