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Idiopathic Granulomatous Mastitis Diagnostic Dilemma and Management: Case Report

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Abstract **Case Report**

Introduction: Idiopathic granulomatous mastitis (IGM) is a rare, benign, chronic inflammatory breast disease of unknown etiology, predominantly affecting women of reproductive age. Its variable clinical presentation and unpredictable course make it a persistent diagnostic and therapeutic challenge. ***Case presentation:*** We report the case of a 41-year-old woman presenting with a painful, erythematous nodule in the left breast, complicated by cutaneous fistulization and purulent discharge. Microbiological cultures were sterile. Breast ultrasound revealed a 20 × 18 mm hypoechoic lesion with multiple perilesional abscesses (BIRADS 4A). Core needle biopsy demonstrated granulomatous inflammation without caseous necrosis or malignancy. A comprehensive etiologic workup was unremarkable. The diagnosis of IGM was established, and oral corticosteroid therapy (60 mg/day) was initiated, leading to marked clinical improvement. The dose was gradually tapered, with no recurrence observed after 15 months of follow-up. ***Discussion and conclusion:*** IGM should be considered in reproductive-age women presenting with inflammatory breast masses after exclusion of infectious and autoimmune causes. Histopathology remains essential for diagnosis. While management is still debated, corticosteroid therapy is the preferred first-line approach. Surgery should be reserved for complicated or refractory cases. A conservative, individualized, and stepwise management strategy is recommended

Keywords: Idiopathic granulomatous mastitis, diagnosis, management, Corticosteroids.

INTRODUCTION

Idiopathic granulomatous mastitis (IGM) is a rare, chronic benign inflammatory breast disorder of unknown etiology, predominantly affecting women of reproductive age. First described by Kessler in 1972 and subsequently by Cohen in 1977, IGM remains a diagnostic and therapeutic challenge [1, 2]. Here, we report the case of a 41-year-old woman with IGM.

CASE REPORT

A 41-year-old woman, mother of three, with a history of prolonged breastfeeding (18 months per child) and 13 years of combined oral contraceptive use, presented with a painful, erythematous nodule in the upper outer quadrant of the left breast (Figure 1). The lesion was associated with cutaneous fistulization and purulent discharge but no ipsilateral axillary lymphadenopathy. Initial treatment with a 10-day course of amoxicillin-clavulanate was ineffective.

Mammography revealed multiple dense areas, primarily in the upper inner quadrant. Ultrasound identified a 20 × 18 mm hypoechoic lesion with several perilesional abscesses, the largest measuring 8 × 5 mm (BIRADS 4A). Microbiological analysis of the pus was sterile. Ultrasound-guided core biopsy demonstrated epithelioid and multinucleated giant cell granulomatous inflammation without caseous necrosis and no malignancy (Figure 2).

A comprehensive etiologic workup, including liver and thyroid function tests, autoimmune markers (ANA, ANCA), syphilis serology, ACE levels, prolactin assessment, urinalysis, serum calcium, creatinine, and chest radiography, was unremarkable. The patient was diagnosed with IGM and treated with corticosteroids (60 mg/day), resulting in marked clinical improvement within three weeks. The dosage was gradually tapered until discontinuation. At 15 months of follow-up, no recurrence was observed.

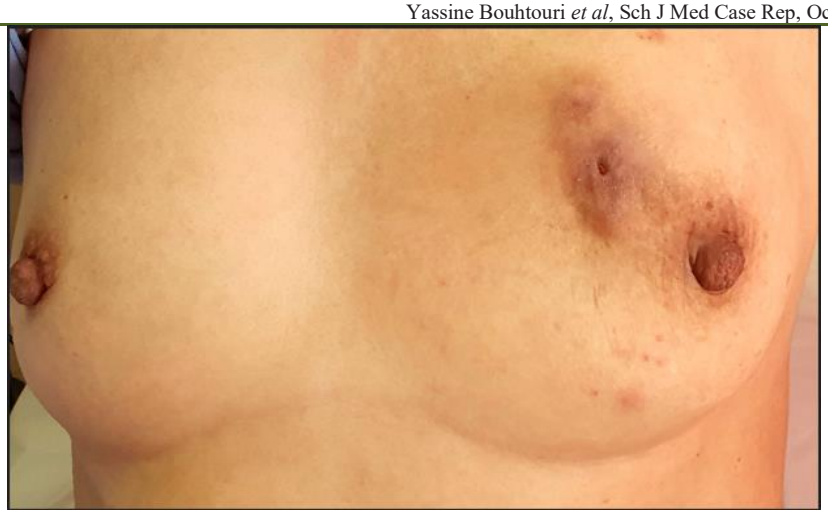

Figure 1: erythematous nodule in the upper outer quadrant of the left breast

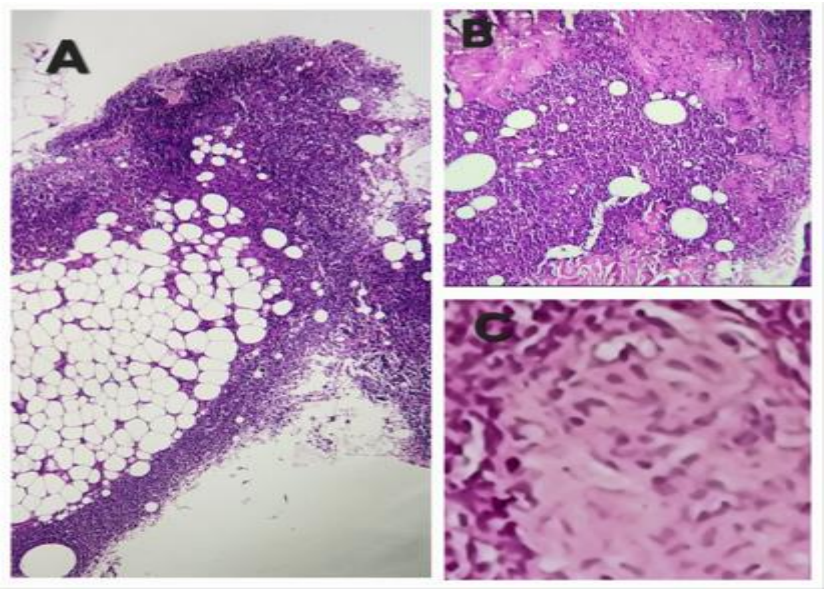

Figure 2: No necrotizing granulomatous inflammatory reaction of breast tissue A-HE*40. B-HE*100. C-HE*400

DISCUSSION

IGM primarily affects women of reproductive age, with a mean onset at 32 years (range 17–78) [3, 4]. Rare male cases have been reported [5].

The pathogenesis remains incompletely understood. Initial nonspecific lobulitis, characterized by lymphoplasmacytic infiltration of multiple lobules, can lead to granuloma formation with central suppurative necrosis. Accumulation of these inflammatory foci may result in secondary abscesses [6]. Etiologic factors include hormonal imbalance, immune dysregulation, infectious agents, tobacco exposure, and α1-antitrypsin deficiency, either individually or in combination.

Clinically, IGM often presents as a unilateral inflammatory breast mass. Advanced cases may show ulceration or fistula formation, with or without ipsilateral lymphadenopathy [7]. Mammography is limited, especially in acute painful states or dense breasts, and rarely shows pathognomonic features. Ultrasound is the preferred first-line imaging modality, revealing hypoechoic, often heterogeneous lesions in over 80% of cases [8]. MRI is not routinely recommended, as it cannot reliably differentiate benign from malignant lesions [9, 10].

Definitive diagnosis relies on histopathology, demonstrating non-caseating lobulocentric granulomas composed of epithelioid histiocytes and Langhans-type multinucleated giant cells, along with chronic inflammatory infiltrates of lymphocytes, plasma cells, and polymorphonuclear leukocytes [11].

Differential diagnosis includes malignant tumors and benign inflammatory breast diseases. Differentiating idiopathic IGM from autoimmune-associated granulomatous mastitis (e.g., sarcoidosis, granulomatosis with polyangiitis, Horton's disease, polyarteritis nodosa, non-Langerhans histiocytoses, hyper-IgG4 syndrome) can be challenging. Tuberculosis,

particularly in endemic regions, must also be excluded; the predominance of neutrophils and absence of caseous necrosis support IGM. Other differentials include bacterial, parasitic, or fungal mastitis, as well as non-infectious granulomatous lesions such as lipophilic granuloma, cytosteatocrosis, sarcoidosis, plasma cell mastitis, and lymphocytic mastitis [12].

Management remains controversial. Historically, surgical excision was the primary treatment but carried high recurrence rates and complications such as fistula formation, delayed healing, and breast deformity. Surgery, alone or with corticosteroids, remains common; however, current trends favor conservative management, limiting surgery to abscess drainage or minimal incisions [13].

Corticosteroids achieve remission in approximately 72% of cases, with a relapse rate of 20%. Colchicine has occasionally been used as an immunomodulator. Immunosuppressive agents such as methotrexate or azathioprine are reserved for corticosteroid-resistant or dependent cases. Surgery is considered for complicated or recurrent disease [14]. Partial mastectomy has demonstrated higher cure rates compared with corticosteroids alone (79% vs. 42%) [15].

IGM is often unpredictable, with alternating periods of remission and relapse. Severe cases frequently require corticosteroids, and bilateral involvement may occur [16].

CONCLUSION

Idiopathic granulomatous mastitis is a rare inflammatory breast disorder with unclear etiology and no standardized management. Clinicians should consider IGM in women of reproductive age. Accurate diagnosis requires exclusion of alternative causes. While treatment remains debated, a conservative, stepwise approach is generally recommended.

Ethics approval: Our institution does not require ethical approval for reporting individual cases or case series.

Patient consent: Written informed consent was obtained from legally authorized representative(s) for anonymized patient information to be published in this article

REFERENCES

1. Kessler E, Wolloch Y. Granulomatous mastitis: a lesion clinically simulating carcinoma. Am J Clin Pathol 1972; 58: 642-646 [PMID: 4674439]
2. Cohen C. Granulomatous mastitis. A review of 5 cases. S Afr Med J 1977; 52: 14-16 [PMID: 560723]
3. MartinF – Origet G- Smadja Amastite granulomateuse une observation d'évolution favorable sous corticothérapie : concours médical 1984, 6, 17, 1543-9
4. AYEVA DERMA M, PerrotinF, et almastites granulomateuses idiopathique, revue de la litterature illustrées par 4 observations. J Gynecol Obstét Bio Reprod 1999 ; 28, 800-7.
5. Boufettal H, Mahdaoui S, Noun M, Hermas S, Samouh S. Mastite granulomateuse idiopathique avec bonne évolution sous traitement médical. Rev Med Interne. 2011 ;32 : 26-28.
6. Cserni G, Szajki K. Granulomatous Lobular Mastitis Following Drug-Induced Galactorrhea and Blunt Trauma. Breast J 1999; 5: 398-403 [PMID: 11348321 DOI: 10.1046/ j.1524-4741.1999. 97040.x]
7. Naraynsingh V, Hariharan S, Dan D *et al.,* Conservative management for idiopathic granulomatous mastitis mimicking carcinoma: case reports and literature review. Breast Dis. 31(1), 57–60 (2010).
8. Hovanessian Larsen LJ, Peyvandi B, Klipfel N *et al.,* Granulomatous lobular mastitis: imaging, diagnosis and treatment. Am. J. Rad. 193(2), 574–581 (2009).
9. Ozturk M, Mavili E, Kahriman G *et al.,* Granulomatous mastitis: radiological findings. Acta Radiol. 48(2), 150–1552 (2007).
10. Dursun M, Yilmaz S, Yahyayev A *et al.,*Multimodality imaging features of idiopathic granulomatous mastitis: outcome of 12 years of experience. Radiol. Med. 117(4), 529–538 (2012).
11. Oztekin PS, Durhan G, Nercis Kosar P, Erel S, Hucumenoglu S. Imaging findings in patients with granulomatous mastitis. Iran J Radiol 2016 ;13(3) : e33900.
12. M. Ayeva-Derman, F. Perrotin, T. Lefrancq, F. Roy, J. Lansac, G. Body, Idiopathic granulomatous mastitis. Review of the literature illustrated by 4 cases, J. Gynecol. Obstet. Biol. Reprod. (Paris) 28 (8) (1999) 800–807.
13. D.R. Bacon, S.M. Ngeve, S.G. Jordan, Granulomatous mastitis: an underdiagnosed inflammatory disease afflicting minority woman, Radiol. Case Rep. 16 (12) (2021) 3990–3994.
14. S. Akbulut, D. Yilmaz, S. Bakir, Methotrexate in the management of idiopathic granulomatous mastitis: review of 108 published cases and report of four cases, Breast J. 17 (6) (2011) 661–668.
15. M. Hladik, T. Schoeller, F. Ensat, G. Wechselberger, Idiopathic granulomatous mastitis: successful treatment by mastectomy and immediate breast reconstruction, J. Plast. Reconstr. Aesthet. Surg. 64 (12) (2011) 1604–1607.
16. M. Hello, A. N´eel, J. Graveleau, A. Masseau, C. Agard, J. Caillon, et al., La mastite granulomateuse idiopathique, Rev. Med. Interne 34 (6) (2013) 358–362.