Mediterranean BioMedical Journals
International Journal of Medicine and Surgery
2018, Volume 5, Regular Issue, ID 206
DOI: 10.15342/ijms.v5ir.206

CASE REPORT

GRANULOMATOUS MASTITIS - A CASE REPORT

Abdellah BABAHABIB[1] , Adil ARSALANE[2] , Fatimazohra AITELFADL[1] , Hafsa CHAHDI[3]

[1] Department of Gyneco Obstetric, Military Teaching Hospital Mohammed V, Mohammed V University, Morocco.
[2] Department of Thoracic surgery, Military Teaching Hospital Ibn Sina, University Cadi Ayaad, Morocco.
[3] Department of Histopathology, Military Teaching Hospital Mohammed V, University Mohammed V, Morocco.

ABSTRACT
Granulomatous mastitis is indeed a rare affliction, but it can constitute a veritable diagnosis and treatment predicament for several reasons. The etiology of this disease remains shrouded in mystery and the treatment depends on the gravity and extension of the lesions, ranging from corticosteroids to surgical excision with an important recurrence rate. We present the case of 40-year-old woman with granulomatous mastitis for which clinical and radiological remission was obtained via medical treatment.

KEY WORDS: Granulomatous mastitis – breast – treatment.

Corresponding author: Dr Arsalane Adil, Department of thoracic surgery, Military Teaching Hospital Ibn Sina, University Cadi Ayaad, Marrakech, Morocco. Phone number: 00 212 639174901 Email : arsalaneadil@gmail.com

INTRODUCTION
Idiopathic granulomatous mastitis is a rare benign breast disease, first described by Kessler and Wolloch in 1972. (1) It is characterized by chronic necrotizing granulomatous lobulitis of unknown etiology. It often mimics breast carcinoma as well clinically and radiologically. Wide local excision, with or without corticosteroid therapy, has often been used to treat such patients, with a high recurrence rate. (2) We present an interesting case of a 40-year-old patient with a chronic breast abscess for which she received corticosteroid therapy with fairly satisfactory clinical and radiological results.

CASE REPORT
We present the case of a 40-year-old patient gesta 3 para 3, with no personal or family history of breast neoplasia or systemic disease. She had used oestro-progestative contraception for 10 years, replaced two years ago by an intrauterine device. The onset of the symptomatology was marked by the appearance of right mastodynia associated with breast inflammation in the upper inner quadrant, impasto and thickening of the skin along with a fever of 39 degrees Celsius, motivating the patient to consult. A breast ultrasound performed showed an echogenic polylobed mass, infiltrated by edema localized whithin the right upper inner quadrant on the para areolar level evoking a pre-suppurative abscess. A mammogram objectified a focal density asymmetry in the upper inner quadrant of the right breast with skin thickening and retraction of the subcutaneous fat (Figure 2). A treatment based on broad-spectrum antibiotic therapy was initiated with a cooling of fever after one week. The evolution was marked by the appearance of an abscessed collection fistulized to skin, with inflammation and desquamation of the corresponding area of skin. The ganglionic areas were free. The diagnosis of tuberculous origins was evoked and a surgical biopsy was made with drainage of the abcess. The anatomopathological findings revealed the presence of non-caseating granulomatous inflammation with negative stains for acid-fast bacilli and fungi; it was labelled histologically as granulomatous mastitis (figures 3, 4). Otherwise, the phtisiological check (dosage of the TB Quantiferon, Genxpert) as well as the research of other etiologies of granulomatous lesions came back negative leading to the conclusion that it was a idiopathic granulomatous mastitis. A corticosteroid therapy was prescribed for 4 weeks with a clear improvement of the local symptomatology and the disappearance of the

general signs. A control ultrasound revealed an evident radiological cleansing of the previously described lesions.

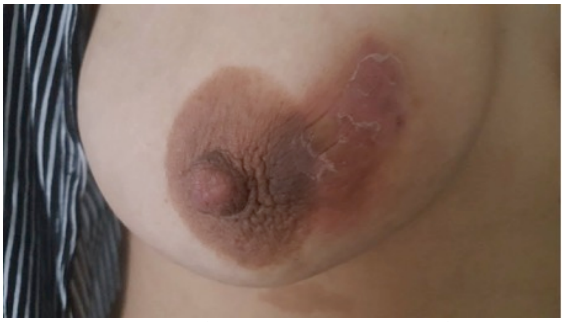


Figure 1: Cutaneous inflammation and desquamation of the internal quadrants including a portion of areola.

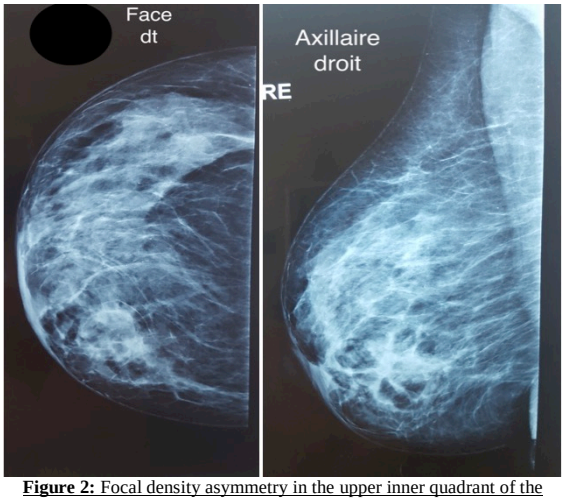
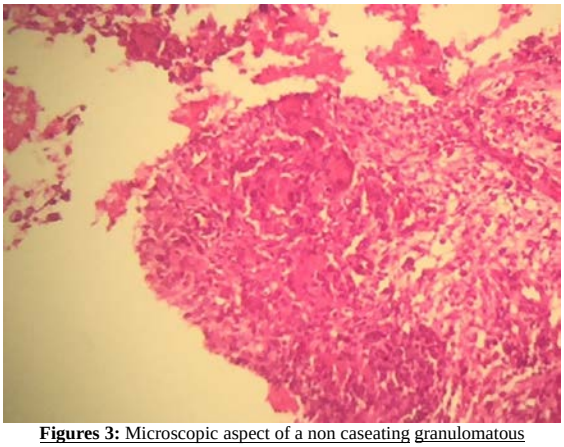


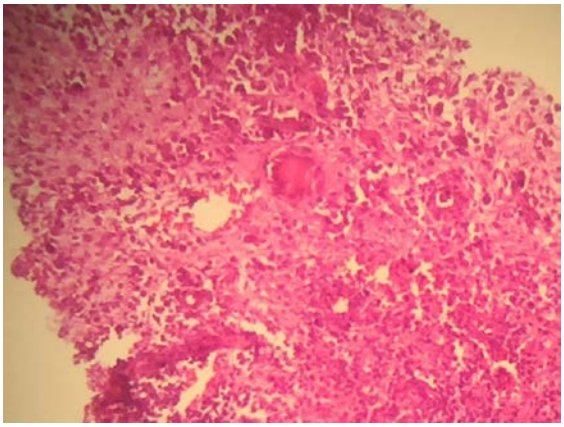
Figure 2: Focal density asymmetry in the upper inner quadrant of the right breast with skin thickening and retraction of the subcutaneous fat.

DISCUSSION

Granulomatous mastitis is a rare non-neoplastic disease of uncertain etiology. The incidence of this condition is also uncertain. It has been estimated that between 0.44 and 1.6% of all breast biopsy specimens represent IGM based on accepted pathological criteria. (3) It usually occurs in women of childbearing age and is generally unilateral. In a relatively large series of 25 patients, the mean age at presentation was 36.5 years. (4) The etiopathogeny of IGM remains unknown with no identiable causative factor. Several mechanistic theories have been proposed including an autoimmune reaction to extravasated protein secretions from mammary ducts secondary to trauma, infection or chemical irritation. (5) Breastfeeding, smoking, and use of the oral contraceptive pill have also been reported to be correlated to idiopathic granulomatous mastitis but never proven. (1, 6) The most common clinical presentation is a unilateral breast lump, but other forms have been observed such as unilateral mastodynia, which was the initial symptom in our case report, nipple inversion (mimicking breast cancer) or lymphadenopathy. (7) Routine radiologic evaluation, ultrasound and mammography may not discern granulomatous mastitis from breast cancer or acute breast infection wich delayes the definitive diagnosis. (8) The most common mammographic findings are an asymmetric density, seen in our patient, or an ill-defined mass, but findings of multiple small ill-defined masses have also been described. Ultrasound findings are also variable. The most common appearance is that of a discrete but irregular hypoechoic mass lesion, like that founded in our case. A multiple hypoechoic masses, parenchymal heterogeneity, and area of mixed echogenicity with parenchymal deformity have also been described. (7) To retain the diagnosis of Idiopathic granulomatose mastosis, other causes of granulomatous inflammation such as tuberculosis, sarcoidosis, mycotic/parasitic infections and Wegener's granulomatosis must be excluded (9) The final diagnosis is made by histological study of surgical specimen. It's characterized by the presence of a non-caseating granulomas which are of a lobulo-centric pattern and often associated with microabscess formation. (5) The evolution of MGI is readly done in a chronic mode with the possibility of local aggravation, abcedation, fistulization and delayed healing after surgery. (2) The recurrence rate is estimated about 40% and there is no predictor of such evolution. (8) The therapeutic arsenal varies from broad spectrum antibiotics usually associated with corticosteroid therapy or colchicine in order to shrink the mass before a lumpectomy to a radical mastectomy depending on the severity and extension of the lesions and the efficiency of medical treatment. (5,10) In our case, corticotherapy was effective with good evolution. In case of resistance to corticosteroids, immunosuppressant drugs can prove useful in the management of this autoimmune pathology. (5)



Figures 3: Microscopic aspect of a non caseating granulomatous epitheioid and gigantocellular (Coloration HE x 10).



Figures 4: Microscopic aspect of a non-caseating granulomatous epitheioid and gigantocellular (coloration HE x 25).

CONCLUSION

We must be careful in diagnosing granulomatous mastitis as it could clinically and radiologically mimic or even be associated to breast cancer. Treatment possibilities are available and must be addressed on a hierarchal basis in order to achieve maximal efficiency with minimal tissue damage especially considering the recurrence rate.

AUTHORS' CONTRIBUTIONS

The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals of the International Committee of Medical Journal Editors. Indeed, all the authors have actively participated in the redaction, the revision of the manuscript and provided approval for this final revised version.

PATIENT CONSENT

Written informed consent was obtained from the patient for publication of this case report.

COMPETING INTERESTS

The authors declare no competing interests.

REFERENCES

[1] Kessler E, Wooloch Y. Glaucomatous mastitis: a lesion clinically simulating carcinoma. Am J Clin Path. 1972; 58:642–646.

[2] Ayeva-Derman M, Perrotin F, Lefrancq T, Roy F, Lansac J, Body G. Idiopathic granulomatous mastitis. Review of the literature illustrated by 4 cases. J Gynecol Obstet Biol Reprod (Paris). 1999 Dec; 28(8):800-7.

[3] Elsiddig KE, Khalil EA, Elhag IA et al. Granulomatous mammary disease: ten year's experience with ne needle aspiration cytology. Int. J. Tuberc. Lung Dis. 7(4), 365–369 (2003).

[4] Azlina AF, Ariza Z, Arni T, Hisham AN. Chronic glaucomatous mastitis: diagnostic and therapeutic considerations. World J Surg. 2003; 27:515–518.

[5] Benson JR, Dumitru D, Idiopathic granulomatous mastitis: presentation, investigation and management. Future Oncol. 2016 Jun; 12(11):1381-94. doi: 10.2217/fon-2015-0038. Epub 2016 Apr 12.

[6] Bani-Hani KE1, Yaghan RJ, Matalka II, Shatnawi NJ. Idiopathic granulomatous mastitis: time to avoid unnecessary mastectomies. Breast J. 2004 Jul-Aug;10 (4):318-22.

[7] Vinayagam R, Cox J, Webb L. Granulomatous mastitis: a spectrum disease. Breast Care (Basel). 2009 Sep; 4(4): 251–254.

[8] Çalis H, Kilitçi A. Granulomatous mastitis concurrence with breast disease. Eur J Breast Health. 2018 Jan; 14(1): 58–60.

[9] Varshochi M, Haghdoost M, Mashrabi O. Idiopathic granulomatous mastitis: a case report. Am. J. Infect. Dis. 6(3), 61–65 (2010).

[10] 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 : 274-277.