Granulomatous Mastitis – A Case Study with Review of Literature

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ABSTRACT
We report a case of idiopathic granulomatous mastitis in a 26 year old female who presented to us with a fluctuating tender mass in left breast. Considering it to be a breast abscess due to history of breast feeding, an incision and drainage was done. The lesion recurred after two weeks. A biopsy was taken and histopathological examination revealed it to be a case of granulomatous mastitis.

Introduction
Idiopathic granulomatous mastitis is a rare benign breast disease, first described by Kessler and Wolloch in 1972. It is characterized by chronic, necrotizing granulomatous lobulitis of unknown etiology, and its clinical features mimic those of mammary carcinoma. There is no standard treatment, but excisional biopsy, with or without corticosteroid therapy, has often been used.

Case Summary
A 26 year old female patient presented to the surgical OPD at Osmania General Hospital with the complain of a tender mass in her left breast. The mass was erythematous, tender and fluctuant. There was history of similar complaint one month back for which an I&D was done in a private hospital. She was breast feeding at the time of presentation. Considering it to be an unresolved breast abscess, another I&D was done and aspirate sent for culture and sensitivity. The patient was sent home on empirical antibiotics. She returned to the OPD two weeks later with similar complaint at the same site. Her previous aspirate was reported to be sterile.

On investigation, her Hb was 11gm%, TLC was 7000/mm3 and ESR was 18mm. Ultrasound revealed a mass in the upper outer quadrant with an overlying subcutaneous collection. Culture of aspirate showed no growth. AFB staining was negative.

Gross appearance of the inflamed breast

Histopathological appearance
Under general anaesthesia, exploration was done. A hard mass was found underneath an erythematous skin patch with minimal discharge. An incision biopsy was taken.

The histopathology report revealed a picture of granulomatous mastitis i.e polymorphonuclear leukocytes, epithelioid cells, plasma cells and giant cells such as the Langhans type or foreign-body type.

The patient is currently started on steroid therapy and is being followed up for improvement.

Discussion
Idiopathic granulomatous mastitis should be differentiated from other chronic inflammatory breast diseases such as mammary duct ectasia (plasma cell mastitis, subareolar granuloma and periductal mastitis), Wegener’s granuloma, sarcoidosis, tuberculosis and histoplasmosis. This condition is characterized by chronic lobulitis with granulomatous inflammation. The inflammatory lesion consists of polymorphonuclear leukocytes, epithelioid cells, plasma cells and giant cells such as the Langhans type or foreign-body type.

The etiology of idiopathic granulomatous mastitis is still unknown. Keller and Wolloch proposed an autoimmune pathogenesis. A localized immune response to extravasated secretions from lobules has been suggested, since many patients had...
previously given birth or were lactating at the time of the initial symptoms. In a recently reported case, immunohistochemical staining showed that the lesion contained predominantly stromal T lymphocytes. It is possible that damage to the ductal epithelium produced by local trauma, a local "chemical" irritant, or viral infection caused a localized immune response, and induced lymphocyte and macrophage migration. However, there has been no evidence of systemic immune abnormalities such as the formation of autoantibodies or antigen-antibody complexes.

The recommended treatment for granulomatous mastitis is complete resection or open biopsy with corticosteroid therapy. Granulomatous mastitis is sometimes complicated by abscess formation, fistulae, and chronic suppuration.

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