**Title:** **Granulomatous Mastitis: A Therapeutic and Diagnostic Challenge**

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**Aim:** The goal of this review article was to summarize available/ present data on Granulomatous mastitis and the diagnostic approach and management of this condition.

**Method**: They searched for literature on PubMed using search terms like “granulomatous mastitis”, and “idiopathic granulomatous mastitis” for data between 2000-2018. No RCTs were obtained. Most studies were retrospective cohort studies and case series. 2 systematic reviews and 1 meta-analysis with 3 presentations were included in the review.

**Data**: Cases were retrospective cohort studies and case series. 2 systematic reviews and 1 meta-analysis with 3 presentations were included in the review.

**Definitions**: Granulomatous mastitis is a rare (incidence of 2.4 per 100,000 women in the US), non-infectious, benign condition of the breast associated with inflammatory breast changes and often is seen to affect women of childbearing age (particularly with a hx of breastfeeding.)

**Etiology and Pathogenesis**: There is limited data, and these are still unknown, but it hypothesized that inflammation due to reactions to things like trauma, metabolic or hormonal changes, autoimmune states, and infection with **Corynebacterium kropppenstedtti** (a gram-positive rod) have been associated with the condition. The number of cases of GM however seems to be more pronounced in non-white patients. The condition usually occurs around 2 years after breastfeeding with a median age of 30.

**Presentation**:

**Clinical findings** include the presence of a mass, pain, erythema, swelling hyperemia, and inflammation.Other include areola retraction, ulceration, etc. Some patients may present with signs of an abscess. This can mimic other inflammatory breast conditions like infectious mastitis, carcinoma, etc. some patients may present with lymphadenopathy.

- Location: This can occur on any quadrant of the breast but is usually seen in the retro areola region.

**Diagnosis:**

**Histopathology**– used to dx. The gold standard is core-needle biopsy and biopsy will show non-necrotizing granulomatous formatio**n**. There may also be localized infiltration with multi-nucleated giant cells, epithelioid histiocytes, and plasma cells. Involved parenchyma may show loss of acinar structures and damaged ducts.

- Different causes of mastitis need to be excluded before dx of GM is made.

**Imaging**(nonspecific): US and Mamno help r/o other possibilities.

**Ultrasound**– may show multiple contiguous hypoechoic masses with posterior acoustic shadowing or posterior acoustic enhancement, advanced cases may show fluid collections and cavities with skin fistulas. Hypervascularity may be detected by doppler.

**Mammography** – shows unilateral focal or regional asymmetry but often fails to identify abnormality.

**Management:** There is limited data to provide proven guidance on the management of granulomatous mastitis, so management is controversial.

- Westernized countries may use a regimen of antibiotics (mostly used for the treatment of mastitis but antibiotics usually fail for GM) as initial therapy and corticosteroids which is then followed by continuous steroid therapy or surgery if symptoms persist.

**Future practice:**

The need for and implementation of more detailed studies and large studies such as RCT (which were not available at this time), may help shed more light on the topic.