

# A FIVE YEAR CASE REVIEW OF GRANULOMATOUS MASTITIS

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## Introduction

Granulomatous mastitis (GM) is an idiopathic inflammatory disease of the breast lobules. Typically said to predominate in parous, younger women, it may present as a mass indistinguishable from cancer<sup>1</sup>. It does not have an infectious cause, although may be associated with malignancy. It is difficult to treat due to frequent recurrence and sinus formation. The condition is uncommon and there are no specific diagnostic features.

## Methods

The database of the department of pathology was searched using the term *granulomatous mastitis* for a five year period. Imaging, clinical notes and pathological reports were reviewed and true cases of granulomatous mastitis identified. Clinical picture and imaging findings were correlated for these cases.

## Results

Seven cases were found during this period, which are summarised below. The age range was 34 to 72, with a mean of 54 years. Only two cases were premenopausal, and these were the only women of non-European origin.

**Case 1** Lump in scar at site of previous excision of breast cancer mimicking malignancy

**Case 2** Recurrent mastitis and abscesses

**Case 3** Well defined mass detected on screening mammogram

**Case 4** Suspicious axillary lymphadenopathy and ill-defined breast lesion concealing malignancy

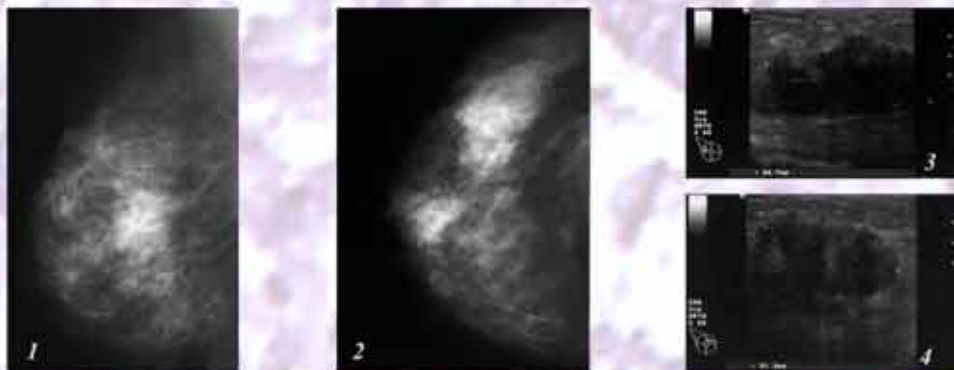
**Case 5** Age 37, chronic breast infection, imaging consistent with abscess, cytology and core biopsy both showed GM

**Case 6** Age 34, breast lump, imaging consistent with abscess, cytology showed granulomatous mastitis

**Case 7** Age 56, breast pain and ulceration, imaging consistent with abscess, cytology showed granulomatous mastitis

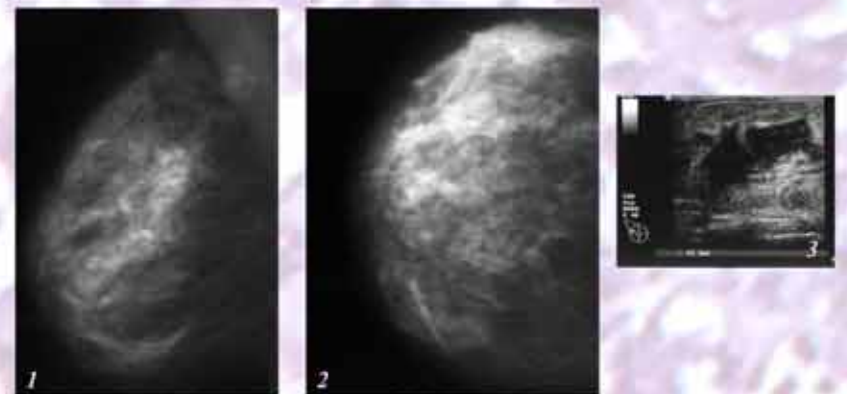
### Case 1 Lump at site of excision of breast cancer mimicking malignancy

A 72 year old woman presented with a lump in the scar from a wide local excision of a breast cancer 15 years previously. The mammogram showed several indeterminate irregular densities *fig 1 & 2*. Three discrete irregular echopoor masses up to 4cm in size were seen on ultrasound *fig 3 & 4*. Cytology of all three areas was inadequate. Core biopsies showed GM at all sites. Repeat cytology of two of the masses after six months gave C1 again. Due to continued clinical suspicion the lesions were excised. Preoperative ultrasound demonstrated that the areas had enlarged and become confluent. Surgical pathology demonstrated GM with no evidence of malignancy.



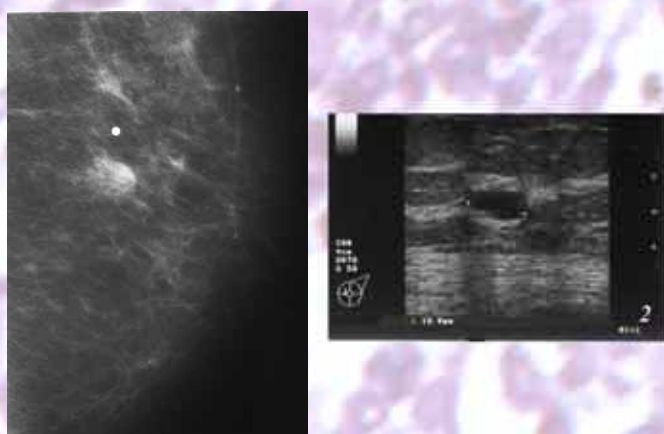
### Case 2 Recurrent mastitis and abscesses

A 51 year old woman with a history of recurrent mastitis and abscesses presented with a new painful breast lump. There was an ill-defined mass on the mammogram *fig 1*, and a 3cm irregular hypoechoic area reaching the skin on ultrasound *fig 2*. Aspiration cytology showed GM. At follow-up ultrasound three months later there was a small residual echopoor area only.



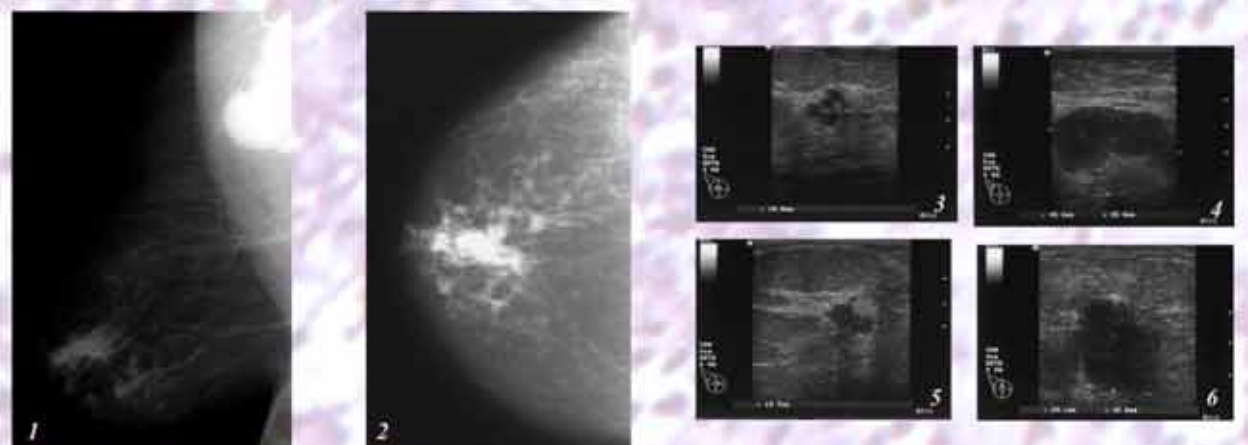
### Case 3 Well defined mass detected on screening mammogram

There was a new well-defined mass on the screening mammogram of a 69 year old woman *fig 1*. This corresponded to a simple-looking cyst which collapsed completely on aspiration yielding blood-stained fluid *fig 2*. Cytology showed GM (C2) and the woman was returned to routine recall.



### Case 4 Axillary lymphadenopathy and ill-defined breast mass concealing malignancy

A 60 year old woman's screening mammogram showed an ill-defined right retroareolar mass and a very large right axillary lymph node *fig 1 & 2*. Ultrasound demonstrated a 13mm breast mass with multiple echopoor lobulated areas *fig 3*, and confirmed a suspicious lymph node *fig 4*. FNA cytology of both sites showed similar findings of GM and lymphadenitis. Core biopsy of the breast lesion confirmed GM with no evidence of malignancy. Follow-up four months later showed a more discrete mass consistent with carcinoma *fig 5*. Repeat cytology again showed GM. Further ultrasound of the same site five months later due to continued clinical concern showed an irregular hypoechoic 23mm mass *fig 6*. Core biopsy of the mass was repeated together with core biopsy of the lymph node. Both showed grade 2 invasive ductal carcinoma with a background of intense inflammation. Mastectomy and axillary clearance confirmed malignancy with 10/12 nodes involved.



## Discussion

This series confirms that granulomatous mastitis is uncommon. Only two patients were premenopausal although it is considered to be a disease of women of this age. In three patients there was clinically apparent chronic inflammation, with no suspicion of malignancy. A further case was more acute but was consistent with an abscess clinically and radiologically. In only two cases was malignancy considered the most likely diagnosis. In these cases there were irregular masses which although initially giving benign pathology required follow up. Case 1 illustrates the how GM mimics malignancy, while in case 4 GM coexisted with breast cancer, which is a recognised phenomenon. When the imaging and clinical features in any way suggest cancer then robust follow-up is required, which may include excision as in these two cases.

## Reference

1. Diseases of the Breast. Harris JR & al. Lippincott Williams and Wilkins, 2000