Granulomatous Mastitis (A Rare Presentation)

Mehul Bhansali

Granulomatous mastitis is a rare benign inflammatory disease of the breast occurring in women of child bearing age pathologically mimicking carcinoma. The entity was first described by Kesler and Wolloch in 1972, elaborated by Cohen in 1977. It is often misdiagnosed as carcinoma leading to unnecessary surgery. Patient usually presents with symptoms of a painful mass, a draining sinus and fever. It is therefore often misdiagnosed as a breast abscess. Associated conditions include tachycardia and tenderness, with lab investigations suggesting an infectious aetiology.

Introduction

Granulomatous mastitis usually occurs unilaterally but bilateral cases also occur in rare instances. The exact incidence is not known as the disease is rare and a lot of cases go unreported. Aetiology is not yet known, however association with OCPs has been proposed. It is nearly always associated with a previous pregnancy (Richard Kempson *et al*).

The disease is possibly related to an altered immune response but the exact pathophysiology is yet to be described. As the name suggests the disease is a chronic inflammatory one as evident from the presence of abundant lymphocytes and giant cells on histology. Of course before diagnosing granulomatous mastitis, classical granulomatous diseases like tuberculosis and sarcoidosis must be excluded. Histoplasma capsulatum has been described as a very rare cause of GM.

Investigations: Mammography shows a speculated tumour mimicking breast cancer. Ultrasonography reveals a hypoechoic lesion with posterior shadowing. FNAC usually is inconclusive as the cellular elements reveal regular chronic inflammatory cells. The final word is that it remains a diagnosis of exclusion.

Histopathological examination shows centrilobular granuloma and microabscess formation, the granulomas in turn showing epitheloid and giant cells. Histological staining shows predominantly T-cells. Culture reports usually turn out to be negative. The cytological diagnosis of GM is difficult because the features overlap with other aetiologies, including tuberculosis. Specific features are absent. The absence of necrosis and a predominantly neutrophilic infiltrate in the background with negative microbiological report favour a diagnosis of GM.

Treatment as described in a few standard textbooks still recommends surgical removal of the mass, debridement and antibiotics.

Recurrence rate has been described by Imoto *et al* at 38%. Other treatment options included corticosteroids and methotrexate (Imoto *et al*, Kim J *et al*).

Whatever be the mode of treatment the follow up of all the cases turn out to be uneventful.

Alternate Names

- Granulomatous lobular mastitis

Associate Professor, Department of Surgery, Cama Hospital, Mumbai 400 001.

	Age	Maximum Incidence	Parity	Size of Lesion	Side	Clinically Assumed To Be Malignant
K.F.S. Hospital	30 To 47 Yrs	Pregnancy To 3 Yrs Since Last Childbirth	High Parity P7+	6 Cm Average	R>L	7 Cases Out Of 12
Our Case	55 Yrs	Perimenopausal	P3	8 x 6 Cm	R	Yes

- Postlactational granulomatous mastitis

A comparative study of this case with 12 cases reported by the King Faisal Specialist and Research Centre,1978-1995 is presented below.

Case Report

A typical case presented with similar symptoms in the OPD of Cama hospital on 29.8.05. The patient, a 55 yr old perimenopausal female, mother of 3, came with the chief complaints of pain, swelling and redness in her right breast since 3 weeks. She had been on antibiotics and analgesics for the last few days. She had no history of OCP intake and an unremarkable family history. No history of trauma and no previous history of breast abscess during breast feeding.

Patient was operated for an incision and drainage after needle aspiration revealed a small quantity of pus like fluid. But on incising the breast it was found to contain no pus but a hard diffuse mass 8 x 6 cm that was almost grating to cut. An incision biopsy was done and the wound closed primarily. The wound healed well but the pain and redness suggesting a continuing inflammatory process did not settle even after 7 days of antibiotics and anti-inflammatory drugs. The histopathology report suggested granulomatous mastitis but could not definitely rule out tuberculous aetiology.

A repeat incision biopsy was carried out around 1 month later on 24.9.05 and sent for repeat biopsy and culture for AFB. The report showed Granulomatous mastitis(slide no. FF3399, Breach Candy) and no evidence of AFB (the staining used was routine HE stain). As the patient was not affording, the immunohistochemistry could not be done.

Treatment

The patient was now started on steroids. Prednisolone 10 mg TDS to start with and gradually tapered to 10 mg OD after a month and to be continued for 6 months with a gradually tapered dosage.

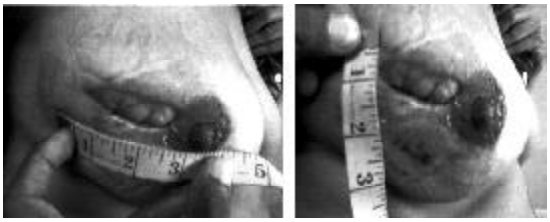

Fig 1: 30/9/2005(3.5 x 3cm) 1 mth after incision on antibiotics. Steroids started soon

Fig 2 : 19/10/2005(1 x 1 cm) 20 days of steroid.

The results were excellent as the patient was symptomatically relieved within a week and the lump gradually reduced in size and tenderness. There was also no impairment in the wound healing as expected. The patient, came for regular follow up and sugar profile fortnightly as she was on steroids for another 4 months. She currently follows up in the OPD 6 monthly and is asymptomatic at present.

Brief Summary of The Events

Symptoms since 8.8.05

Presented on 29.8.05. I and D and biopsy done on same day and HPE sent

Readmitted on 16.9.05 and repeat biopsy sent

Prednisolone started on 29.9.05 and was on tapered dose of prednisolone for 4 months.

Conclusion

Finally it can be said that granulomatous mastitis being so rare and the course

unpredictable, a lot of work and research remains to be done on the subject and the final word on the best possible treatment remains to be said.

References

1. Fletcher A, Magrath IM, Riddell RH, Talbot IC. Granulomatous mastitis, a report of seven cases.
2. Kessler E, Wolloch Y. Granulomatous mastitis: a lesion clinically simulating carcinoma. *Am J Clin Pathol* 1972; 58 (6) : 642–46.
3. Miller F, Seidman I, Smith CA. Granulomatous mastitis. *N Y State J Med* 1971;71 (8) : 2194–95.
4. Shigeru Imoto[1], Tomoki Kitaya[2], Tetsuro Kodama[3], Takahiro Hasebe[4], Kiyoshi Mukai. Idiopathic granulomatous mastits: Case Report and Review of the Literature
5. Kim J, *et al.* Methotrexate in the management of granulomatous mastitis.

BIODEGRADABLE DRUG-ELUTING STENTS: PROMISES AND PITFALLS

The recent resurgence of interest is undoubtedly due to the fear of late stent thrombosis after implantation of drug-eluting stents.

In today's Lancet, John Ormiston and colleagues report 1-year follow-up of patients with a single coronary-artery.

The novelty of the new study is the use of a superficial everolimus-eluting polymer layer, which led to nearly complete elimination of both intimal hyperplasia and the need for reintervention at 1 year. For a biodegradable stent.

The risk of bulky stent particles forming an embolus downstream was not addressed by the absence of clinical events in this study because of the small number of patients and short follow-up. Serial MRI studies with late gadolinium-enhancement are probably needed to exclude clinically silent emboli that might lead to severe cardiac damage after implantation of long biodegradable stents in multivessel disease.

If biodegradation requires 2-3 years, is there a real advantage over conventional drug-eluting stents for which we still do not have convincing data for a persistent risk of stent thrombosis beyond 3-4 years?

Results at 1 year in 29 patients ***are not*** enough to define acute and subacute thrombogenic risk, and offer no information about late thrombosis.

Events as potentially deadly as stent thrombosis should ideally be eradicated; and radical alternatives to conventional stents, such as biodegradable stents, deserve to be the focus of research investment.

Carlo Di Mario, Giuseppe Ferrante, The Lancet, 2008; 371 : 873-74.