# **Case Report**

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# Suture granuloma mimicking axillary recurrence in bilateral breast carcinoma: a case report

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#### **ABSTRACT**

An axillary mass caused by foreign body reaction post mastectomy is a rare occurrence and may pose a diagnostic challenge. We report our experience with a case of suture granuloma of the axilla mimicking recurrence in a patient with aggressive bilateral breast carcinoma. A 47-year-old female presented with left axillary swelling following bilateral modified radical mastectomy for carcinoma. Radiological and pathological investigations were equivocal. A provisional diagnosis of recurrence was made, and the swelling was excised. On histopathology it was found to be a suture granuloma.

Keywords: Breast carcinoma, MRM, Suture granuloma

#### INTRODUCTION

A foreign body granuloma is a reaction to an immunologically inert material which endogenous or exogenous. Various foreign bodies like sutures, silicone, paraffin, cotton gauze, etc. introduced into the human body during surgery or trauma can lead to a foreign body granulomatous reaction. Detection of a new axillary swelling during follow up of a patient with prior surgery for breast carcinoma (BC) poses a diagnostic challenge. Most of these masses are presumed as recurrences.2 However, it is not uncommon to detect suture granulomas in these clinical settings. Even imaging modalities like ultrasound or mammography may falsely interpret such a swelling as recurrent lymph node. Eventually, a biopsy reveals the true nature of a suspicious lymph node. Our literature review found only two cases of foreign body granuloma in the axilla of patients who had undergone breast surgery, and none of them was due to surgical suture material. Here, we present the case of 47-year-old female who presented

with a painless left axillary swelling one and a half months post bilateral modified radical mastectomy for bilateral BC. The swelling was diagnosed as a suture granuloma on histopathological examination. Although, suture granuloma is rare, it should be considered in the differential diagnosis.

#### **CASE REPORT**

A 47-year-old female presented with painless, progressive lump in left breast for 1 year and right breast for 9 months respectively. There was no other significant history. Her examination revealed a 4.5x 4cm lump in upper outer quadrant of left breast and a 3x3cm lump in upper outer quadrant of right breast and bilateral multiple enlarged axillary lymph nodes. Right supra-clavicular lymph node was also palpable. Mammography showed features suggestive of carcinoma in bilateral breast. Fine needle aspiration cytology showed features of ductal carcinoma in both the breasts with metastasis to axillary lymph nodes. Patient's workup showed no signs of

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systemic spread. Trucut biopsy from B/L breast lesions showed Infiltrating ductal carcinoma-NOS and the cancer was ER/PR and Her2Neu negative. She was offered 4 cycles of anthracycline based neoadjuvant chemotherapy followed by 1 cycle of taxane based neoadjuvant chemotherapy. There was complete clinical response after which she underwent bilateral modified radical mastectomy.

One and a half months after the procedure she reported a lump in her left axilla which she noticed accidentally during self-examination. Local examination of the left axilla revealed a 3x3cm well defined, hard, painless mass. The surgical wound of B/L mastectomy had healed completely. Clinically, it was suspected to be recurrence. Complete metastatic workup was done and there was no evidence of tumour spread. Ultrasound and USG guided FNAC of the swelling was inconclusive and excisional biopsy of the lump was done. Intraoperative finding revealed a 2.5x2cm capsulated cystic swelling which was sent for histopathological examination. Histopathological examination showed fibro collagenous and fibro adipose tissue showing numerous foreign body giant cells, foreign body granulomas, suture materials and lymphocytic infiltrate and congested blood vessels. No evidence of malignancy was identified. Hence the features were suggestive of suture granuloma (Figure 1).

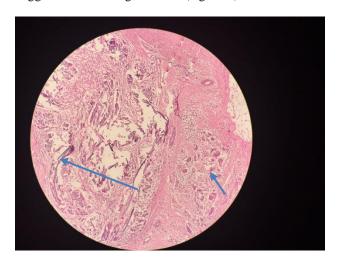


Figure 1: HPE shows foreign body reaction (small arrow) and suture material (big arrow).

#### DISCUSSION

A suture granuloma is a foreign body granulomatous reaction which can occur after a variety of operations. The causative agent of a foreign body granuloma may be exogenous, like suture material, surgical sponge, silicone, talc or endogenous like cholesterol, keratin or goutous tophi.<sup>1,2</sup> In our patient the causative agent was a surgical suture. Suture granulomas can occur anywhere in the

body after a variety of operations and have been reported to mimic neoplasms. It can form months to years after the surgical procedure. The clinical presentation may vary from a classic inflammatory reaction with erythema, swelling, pain and finally, rejection of the suture material, to a chronic inflammatory reaction with a granuloma formation that may present as a solid, painless mass.<sup>3,4</sup> Our patient presented with an axillary swelling one and a half months after bilateral modified radical mastectomy (MRM) for bilateral BC. To the best of our knowledge there are no previous reports of an axillary suture granuloma mimicking recurrence after B/L MRM. Adams et al.5 reported a case of axillary foreign body granuloma containing silicone material from a breast augmentation procedure. Ersoy et al.2 reported a case of retained Penrose drain in the axillary region, which was surrounded by a pseudo capsule. Our case report highlights the diagnostic dilemma faced by physicians while dealing with a new onset axillary mass in a patient who has undergone surgery for BC. Most of the times, both imaging and FNAC are inconclusive, as was in our case, and ultimately the diagnosis is made on histopathological examination.

#### **CONCLUSION**

A chronic granulomatous reaction leading to a palpable mass can occur at the operative site following modified radical mastectomy. Since suture granulomas can mimic recurrence, a high index of suspicion is required for their diagnosis which is usually confirmed by histopathology.

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