CASE REPORT

Subareolar breast abscess mimicking breast cancer in a 51 year old male

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Abstract:

Objectives: Although very common in women, subareolar breast abscess is rarely reported in men, and even when diagnosed tends to be associated with opportunistic pathogens in patients with genetic or acquired causes of immune deficiency.

Case report: We describe a 51 year old man without any significant past medical history or associated comorbidities who presented with a lump in the left breast of three weeks’ duration. He complained of mild tenderness and reported it had grown in size. The patient was apyrexial and on clinical examination no lymphadenopathy was identified but there was a tender 40X30 mm left breast mass, with normal overlying tissue and a retracted nipple. Ultrasound, fine needle aspiration and core biopsies were all highly suggestive of a benign process and breast abscess, although no organism was identified.

Conclusion: Although very rare, breast abscess in a male patient is a pathology that clinicians should always consider. To the best of our knowledge this is one of the few reports of a breast abscess in an otherwise fit male patient.

Key words: Subareolar Breast abscess, Fine needle aspiration, Core Biopsy

Introduction

Although frequently diagnosed in female patients, breast abscess is a pathology rarely seen in men. There have been few reports published but they all refer to male breast abscesses diagnosed in patients with genetic or acquired causes of immune deficiency and mainly caused by opportunistic pathogens.6,7,8,9 We present a case of a patient, otherwise medically fit, who presented with a clinical picture highly suggestive of a malignant process without major local or systemic indicators of an infectious process. We investigated the patient according to the protocol used to diagnose malignancy: ultrasound (US), FNA (fine needle aspiration) and core biopsy. All investigations were highly suggestive of benignity, indicating a diagnosis of breast abscess. This case highlights that chronic breast abscess can mimic breast cancer, and clinicians should keep this in mind. Being so rare, we believe that there is a need for a thorough investigation in such presentations in order to exclude a possible diagnosis of breast cancer. We found that in our case confirming the benign nature through US, FNA and core biopsy helped us deliver the diagnosis to the patient with the support of solid evidence. We believe that it is essential to have such extensive investigations when it comes to differentiating between such different pathologies with totally different management plans and a totally different psychological impact on the patient. Although thoroughly investigated we suggest both in our case and others that the patient such continue to be monitored at least until the inflammatory process resolves to ensure there is no underlying malignant process.

Case report

A 51 year old retired man was referred by his GP to our one-stop breast clinic with a 3 weeks history of a lump situated under the left breast areola. There was minimal tenderness associated with the mass and no other systemic symptoms identified by the patient. He had a past medical history of hypothyroidism and an episode of deep vein thrombosis in 2010 but no significant breast pathology. He smoked about 12 cigarettes a day but drank little alcohol. He took thyroxine and there was no reported history of breast trauma.
Clinical examination revealed a 40X30 mm area of indurated tissue overlying a non-fluctuant mass situated under the left areola. The induration was poorly defined from the surrounding tissue and there was mild tenderness associated with it. The overlying skin appeared normal. There was no cellulitis and no “peau d’orange” was identified. The nipple was retracted and there was evident nipple asymmetry but no nipple discharge. No lymphadenopathy was identified. The patient was apyrexial and the right breast was normal. Ultrasound of the left breast showed a 16mm reduced echo irregular mass situated under the areola that showed acoustic enhancement posteriorly. Although the ultrasound images (figure 1) were consistent with an abscess it was felt that neoplasm could not be excluded. FNA was carried out and pus obtained which was sent for microbiological analysis, which showed a high density of white cells. No organism was identified and there was no growth on culture.

Following the ultrasound report the patient was started on co-amoxiclav 625mg tds. A week later he was reviewed in clinic. Although slightly improved there was still a firm mass situated under the left areola with associated tenderness. On this occasion there was an attempt to aspirate the contents of the abscess but only a minimal quantity of pus could be obtained and the attempt was abandoned. The patient was sent home to continue co-amoxiclav. On review after another week there was further slight improvement, but still the same amount of indurated tissue. As it was felt neoplasm could not be entirely excluded a breast core biopsy was obtained. This demonstrated areas of abscess formation with surrounding scarring. There was no epithelial proliferation or associated microcalcification and no signs of malignancy. It was felt the biopsy represented breast abscess.

**Figure 1** Ultrasound image. 16mm irregular lesion, showing acoustic enhancement, consistent with an abscess, but cannot exclude neoplasm

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**Figures 2 and 3:** Histology images confirming breast abscess.

We therefore established a diagnosis of breast abscess. The patient was understandably relieved that malignancy had been excluded.

On review six months later the lump had completely resolved.

**Discussion**

Breast abscess in male patients is very rarely diagnosed as is breast cancer\(^1,2\). The most common cause of benign masses of the male breast is gynaecomastia which is frequently
asymmetrical. It is very important to be aware of the probability of such a diagnosis when presented with a case of a breast mass developing in a male patient and to remember it can mimic breast cancer. Breast abscess is rare in men\textsuperscript{1,12,13}, but breast cancer is not so unusual\textsuperscript{10,12,13}. Based on this we emphasize the importance of fully investigating a breast mass in order to exclude the diagnosis of breast cancer, especially in a case like this when the clinical presentation was highly suggestive of a malignant process. We believe that confirming the diagnosis of breast abscess allowed us to avoid unnecessary possibly mutilating surgery.

As far as we are aware this is one of the few reports of a male breast abscess mimicking a malignant lesion in an otherwise fit patient.

There are reports of breast abscesses in patients with comorbidities that affect the immune system such as HIV or diabetes mellitus. These are often caused by opportunistic pathogens such as \textit{Salmonella enterica}, \textit{Pseudomonas aeruginosa} or \textit{Mycobacterium tuberculosis}\textsuperscript{6,7,8,9}. We were able to identify only three other cases of male breast abscess, in which the diagnosis was based on the FNA findings\textsuperscript{3,4,5}.

Conclusions

We emphasize the need to consider breast abscess as a differential diagnosis of a breast mass in men. This should be appropriately investigated to exclude malignancy.

References