

Benign Gynecomastia with Abscess

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Abstract

Gynecomastia is a common finding in male patients, however, abscess is a rare finding in male patients. Typical management for benign gynecomastia is to continued surveillance and no additional annual imaging is required [1]. Breast abscess in male is managed with incision and drainage and antibiotics [2], however, the management of gynecomastia superimposed with recurrent abscess does not have clear management and should be managed on an individual basis. We present a case of a 44-year-old man who with a recurrent left breast abscess in addition to persistent gynecomastia. The abscess was drained and cultured. The culture grew *Citrobacter koseri*(diversus) and patient was placed on Bactrim DS for 7 days and was referred to the breast clinic for further evaluation. This study aims to elucidate and review the literature to identify similar cases and potential management of male patients with recurrent abscess and gynecomastia.

Keywords

Gynecomastia, Subareolar Abscess

1. Introduction

Gynecomastia is a benign proliferation of glandular breast tissue in men [3]. It can be an idiopathic or pathologic process [1]. The etiology of gynecomastia can range from hormonal imbalances to chronic conditions such as, cirrhosis, hypogonadism, and renal disease [1]. It can also be induced by use of medications, recreational drugs and in rare cases, tumors [4]. Idiopathic gynecomastia is typically self-limited and can be closely monitored [1]. Medical treatment can be considered if the patients gynecomastia developed recently, is severe or does not have an underlying cause [1]. In the case that medical therapy is not effective, or malignancy is suspected surgery can be considered [1].

Breast abscess is a rare occurrence in males [5]. It has been found in patients that have HIV infection, diabetes, duct ectasia, squamous cell carcinoma, tuberculosis of breast and chest wall, among other causes [6]. The etiology of subareolar abscess has not been identified [2]. The proposed mechanism is that it starts with metaplasia of the squamous cells in the lactiferous ducts and ampulla. This can be incited by comedomastitis, inverted nipples, or a congenital abnormality of the ductal systems. Keratinization can occur concurrently with squamous metaplasia and can cause obstruction of ducts which can lead to inflammation and rupture of the ducts making them more susceptible to bacterial infection [2]. In cases of subareolar abscess in men it has been found to be caused by gram-positive bacteria and in recurrent cases it is more commonly caused by anaerobic bacteria [2]. Smoking has been found to have a strong association with subareolar abscess as well [5]. Smoking can damage the subareolar ducts causing tissue necrosis and subsequent infection [7]. In addition to the substances in cigarettes causing damage it can also cause hypoxia which may further damage ducts [7]. Breast abscess in males are managed with incision and drainage and antibiotics, however, the management of gynecomastia superimposed with recurrent abscess does not have clear management and should be managed on an individual basis. We present a case of a 44-year-old man who with a recurrent left breast abscess in addition to persistent gynecomastia.

2. Case Presentation

44-year-old man presented to the Emergency department (ED) with a left breast abscess (Figure 1). The patient explained that it started about 1.5 weeks prior to coming to the ED. He explained that it began with some redness, swelling, and pain at the left areolar region. It progressively worsened over a few days and increased in swelling and pain, but also began to produce white, non-malodorous discharge from the nipple. The patient had a similar case 3 months and 1.5 - 2 years prior in the same site. The patient had a history of gynecomastia bilaterally, bipolar disorder and schizophrenia. The patient denied any allergies and was taking Seroquel 200 mg twice daily and divalproex 500 mg twice daily. He did not have any significant family history. However, the patient was noted to be a "passive smoker" as far as his history goes back to 2011 in the electronic medical system. He indicated that he smoked anywhere from 2 - 5 cigarettes daily. For further workup the patient had an ultrasound upon his ED visit, and it revealed that in the left retroareolar area, there is a complex fluid collection measuring $0.9 \times 3.5 \times 0.9$ cm, suggestive of an abscess (Figures 2-4). The patient had a mammography 3 months prior which revealed that there is moderate amount of retroareolar breast tissue on the left and a small amount of retroareolar breast tissue on the right, consistent with bilateral gynecomastia (Figure 5). During this visit to the ED abnormal labs include an elevated glucose (135 mg/dl), CRP (12 mg/L) and erythrocyte sedimentation rate (19 mm/hour). The patient also had low RBC (4.05), hemoglobin (12.2) and hematocrit (37.7). In the ED the abscess was incised and aspirated yielding 7 cc of seropurulent fluid. The patient was

placed on Bactrim DS for 7 days and was referred to the breast clinic for further evaluation. The aspirant was cultured, and it later grew *Citrobacter koseri* (diversus).

3. Discussion

Gynecomastia is the most common breast disorder in men [6]. This can be seen physiologically in adolescents and older men, usually over the age of 60 [3]. Abscess makes up approximately 1% - 3% of breast abnormalities in males [6]. Gynecomastia usually presents as a regular and symmetric lesion below the nipple-areolar complex [8]. On ultrasound, gynecomastia is typically a well circumscribed hypochoic area that is retroareolar in location [8]. Subareolar abscess



Figure 1. Photograph of the left breast demonstrates diffuse edema and erythema of the left breast with associated skin changes.

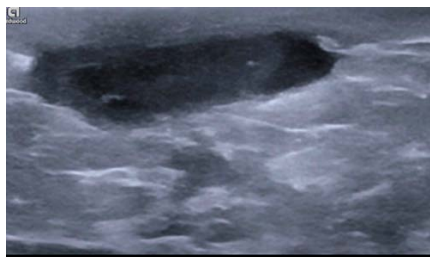


Figure 2. Targeted ultrasound of the left subareolar area showed a complex fluid collection measuring $0.9 \times 3.5 \times 0.9$ cm, suggestive of an abscess.

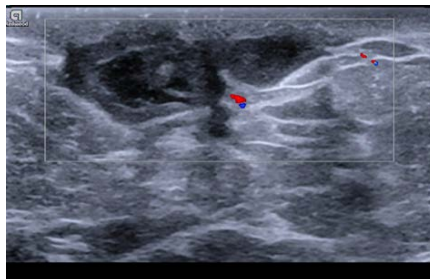


Figure 3. Targeted ultrasound with doppler flow of the left subareolar area showed a complex fluid collection measuring $0.9 \times 3.5 \times 0.9$ cm, suggestive of an abscess.

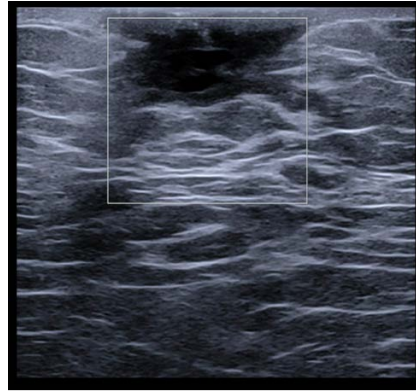


Figure 4. Targeted ultrasound of the left subareolar area demonstrated a fluid collection concerning for abscess.

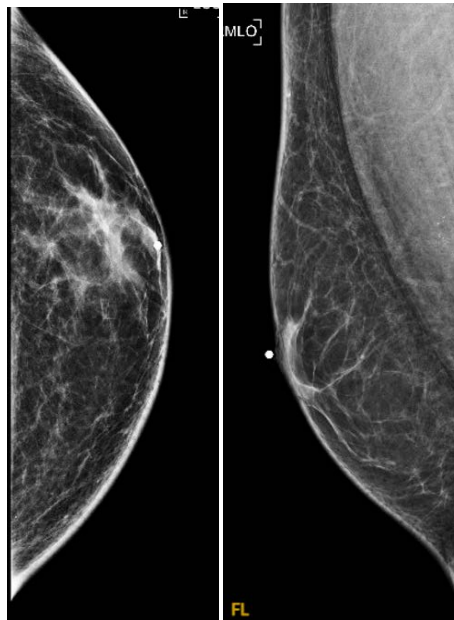


Figure 5. Mammogram demonstrates moderate amount of subareolar breast tissue consistent with gynecomastia. No suspicious masses or suspicious calcifications are seen.

(SBA) however, typically affect women [2]. Generally, breast abscesses in women are classified into two categories: puerperal and nonpuerperal [9]. Puerperal SBA can happen during pregnancy, lactation, or weaning [2]. The overwhelming majority of nonpuerperal SBA is found in the retroareolar and periareolar areas of the breast [2]. Generally, subareolar breast abscess are unilateral but can also be bilateral and there may not be discharge [8]. SBA's can also occasionally have microcalcifications that resemble malignancies [8] and hence should be further worked up if suspicious. Breast abscesses have been reported in male patients with HIV, diabetes and in some cases who are bedridden [6]. Male breast cancer is rare, but when present, it is usually in an advanced stage [6]. Inflammatory

breast cancer may mimic benign lesions so its presence should also be ruled out [6]. Tuberculosis abscess can also present as gynecomastia [10] and should also be considered when working up patients who present with gynecomastia, subareolar abscess or both.

Management for benign gynecomastia is to continue monitoring but no further management is required unless the patient would like treatment or if the case is very severe [1]. Treatment for mild abscess includes broad spectrum antibiotics with Gram positive coverage [6]. However, incision and drainage should be conducted in addition to this as severity worsens [6]. Cytology and culture of aspirate should also be carried out [6]. If possible, especially in recurrent cases biopsy of tissue can be taken and pathology can be used to rule out malignancy or tuberculosis [2]. Surgical intervention may be required in persistent cases [6]. Acid-fast bacilli such as mycobacterium can also cause breast abscess and so Ziehl-Neelsen stain can be performed on inflammatory breast aspirates as well [8].

4. Conclusion

In summary, what makes this case unique is the patient who did not have many of the predisposing conditions that would make him high risk to developing a breast abscess. He did not have HIV, TB, or renal deficiencies. The patient did have elevated glucose and had a history of schizophrenia. He is being treated with divalproex and quetiapine. Unlike other antipsychotics, his medications have a low likelihood of causing gynecomastia [11]. This patient also has an extensive history of daily cigarette smoking. Several studies have shown that smoking can predispose individuals to developing breast abscess [5]. In addition to the management discussed, patients with an extensive smoking history should also be counseled on smoking cessation to prevent breast abscess. However, the patient was managed with incision and drainage as well as antibiotic treatment. The patient is currently pending follow-up imaging but has not presented with recurrent symptoms since his last visit. The complexity of gynecomastia superimposed with subareolar abscess can prove to be a challenging condition to treat. We hope that this case provides some guidance which is the most appropriate steps to take when managing patients with this presentation.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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