Case Report

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Surgery Section

Day Care Surgical Management of Post FNAC Breast Abscess: A Case Report

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ABSTRACT

Fine Needle Aspiration Cytology (FNAC) is a simple, minimally invasive, and widely used diagnostic technique for evaluating breast lesions. It is generally considered a safe procedure with a low complication rate. However, on rare occasions, unexpected adverse events such as abscess formation can occur. Here, the authors report the case of a 67-year-old woman who developed a retroareolar abscess following FNAC of the breast. The patient developed pain, redness, and swelling at the aspiration site a few days after the procedure. The clinical examination confirmed a tender, fluctuant swelling suggestive of an abscess. She was managed successfully with Incision and Drainage (I&D) under local anaesthesia in a day care setting, which allowed rapid treatment and recovery without the need for hospital admission. Pus obtained during drainage was sent for culture and sensitivity testing, which grew *Staphylococcus aureus*. Based on these findings, the patient was treated with an appropriate course of oral antibiotics. She showed excellent clinical improvement, with complete resolution of the infection and satisfactory wound healing on follow-up. The present case highlights that, although FNAC is generally safe, clinicians should remain aware of potential but uncommon complications such as abscess formation. Prompt recognition and early intervention are essential for favourable outcomes. The current case also demonstrates that such infections can be effectively managed with simple day care surgical procedures, minimising patient discomfort, hospital stay, and cost. Awareness of these rare complications ensures timely management and reinforces patient safety in routine diagnostic practice.

Keywords: Antibiotics, Fine needle aspiration cytology, Incision and drainage, Post-procedural complication, *Staphylococcus aureus*

CASE REPORT

A 67-year-old woman presented with pain and swelling in the right retroareolar region for one week. She had undergone FNAC one week ago, at an outside facility for a palpable breast lesion identified a month earlier. Initially asymptomatic, she developed localised pain and swelling a few days after the procedure. There were no associated systemic symptoms such as fever, nipple discharge, or trauma. There is no past surgical history, no known co-morbidities, and no significant family history.

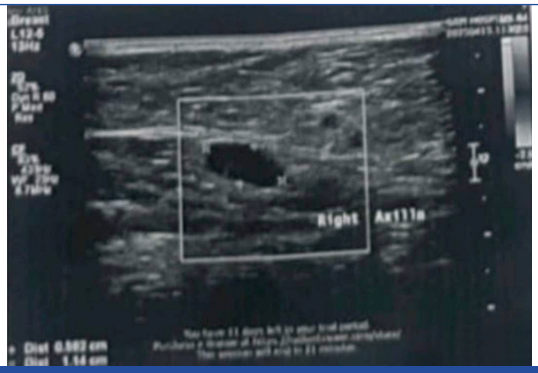
On examination, a soft, warm, tender, and fluctuant swelling measuring approximately 3×2 cm was noted in the retroareolar region of the right breast [Table/Fig-1]. There were no overlying skin changes such as ulceration, induration, pus point, or peau d'orange. The left breast and systemic examination were unremarkable. The right axilla was normal with no lymphadenopathy.

Ultrasound showed a thick-walled, heteroechoic collection measuring 2.7×2.6×2.4 cm with internal echoes and peripheral vascularity, suggestive of a localised infective process [Table/Fig-2]. Mild enlargement of right axillary lymph nodes was also observed. FNAC cytology revealed benign ductal and myoepithelial cells with a proteinaceous background, consistent with papillary hyperplasia. No evidence of malignancy was detected. Complete Blood Count (CBC) and C-Reactive Protein (CRP) were within normal limits, although mildly elevated inflammatory markers, procalcitonin 0.3 microgram per litre were noted.

An I&D procedure was performed under local anaesthesia in a day care surgical setting. A vertical incision over the fluctuant area yielded approximately 10 mL of thick purulent material. The cavity was irrigated with saline and dressed with sterile gauze. No drain was placed. The patient was discharged the same day on oral antibiotics: T. Clindamycin 600 mg BD {Bis in die (twice daily)} for seven days, and analgesics: T. Paracetamol 650 mg BD for 3 Days.

Pus culture revealed *Staphylococcus aureus*, which was sensitive to the empiric antibiotics administered. Follow-up and outcome assessments were performed on postoperative days 3 and 7. The wound was clean and showed healthy granulation tissue. Pain and swelling had resolved. Follow-up visit on week 3, complete healing was observed by secondary suturing [Table/Fig-3] and on one-month review, the patient remained asymptomatic, with no signs of recurrence.

[Table/Fig-1]: Preoperative clinical image showing retroareolar abscess.



[Table/Fig-2]: Ultrasound showing the abscess collection.

[Table/Fig-3]: Postoperative clinical image after 3 weeks.

DISCUSSION

Although FNAC is a safe and routinely performed diagnostic tool, complications such as abscess formation, though rare, must be recognised [1,2]. The reason behind this breast abscess could be FNAC done under septic conditions in an outside hospital. The prevalence of this in India and worldwide is also not available. Infections may occur more frequently in cystic or necrotic lesions or when aseptic techniques are compromised [3]. The present case was unique due to the patient's age and non-lactating status.

Gautam B et al., showed thyroid abscess Post-FNAC in an immunocompetent host, in which the patient underwent Interventional Radiology (IR)-guided drainage of 30 cc thick, dark brown fluid and started on broad-spectrum Intravenous (IV) antibiotics, which were then modified based on the bacteriology report showing the presence of Gram-variable rods, specifically *Corynebacterium* [4]. In Coelho MV et al., a similar postoperative complication of acute parotitis following one day after FNAC of the parotid gland was noted, in which the patient was treated with IV antibiotics (amoxicillin-clavulanate and clindamycin) for 10 days and then continued with oral antibiotics for an additional two weeks [5]. Differential diagnoses considered were mastitis, inflammatory carcinoma and Paget's disease, which were excluded by clinical examination. In contrast, this case demonstrates that timely surgical management of day care procedures, including I&D and appropriate antibiotics, can result in complete resolution without hospitalisation. De Souza Chamadoira JP et al., reported a case of a lactating woman diagnosed with a breast pseudoaneurysm following a 14-gauge ultrasound-guided core needle biopsy, which was detected by a colour doppler exam, and treated with surgery [6]. Vanni G et al., reported a 50-year-old patient was admitted to the Emergency Department for dry cough, fever, chest discomfort, dyspnoea, and slight confusion four days after Vacuum-Assisted Breast Biopsy (VABB). After diagnosis, the patient required an open procedure with inpatient admission due to the more advanced phase of haematoma. The delayed presentation necessitated an invasive procedure to treat a common complication that would have been treated conservatively otherwise [7].

CONCLUSION(S)

The Post-FNAC abscess formation, although rare, should be considered in the differential diagnosis of patients presenting with localised breast swelling and pain after the procedure. Prompt diagnosis and timely intervention, such as I&D, can prevent complications and allow for safe outpatient management.

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