



Mini Review

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# An Atypical Presentation of Superficial Breast Cancer: A Case Report and Review of the Literature

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To Cite This Article: Paolo Izzo. An Atypical Presentation of Superficial Breast Cancer: A Case Report and Review of the Literature. Am J Biomed Sci & Res. 2023 18(6) AJBSR.MS.ID.002535, DOI: 10.34297/AJBSR.2023.18.002535

Received: 📅 May 18, 2023; Published: 📅 May 24, 2023

## Abstract

**Background:** Retroareolar breast tumors are common, but malignancies arising from these glands are rare. This report discusses a case of a superficial breast tumor in a 54-year-old female, highlighting the importance of a broad differential diagnosis when evaluating breast lumps.

**Case presentation:** The patient was presented with a progressively growing, ulcerating superficial breast mass in her left breast. Diagnostic assessment included PET scan and histopathological examination, which confirmed a Grade II superficial infiltrating ductal carcinoma.

**Interventions:** The patient underwent a modified radical mastectomy under general anesthesia. Postoperatively, the patient was initiated on tamoxifen, an estrogen receptor modulator, as per current guidelines.

**Outcomes:** The patient recovered without complications and showed no signs of recurrence or metastasis during follow-ups.

**Conclusion:** This case underscores the importance of a thorough examination and high index of suspicion for any breast lumps, emphasizing the crucial role of early detection and aggressive management in improving patient outcomes. The report adds to the existing literature on the varied presentations of breast cancer, potentially aiding in the identification and management of similar cases in the future (Figure1).



**Figure 1:** The mass on the left breast, which 3.0cm×3.0cm in size. The boundary is unclear, the shape is irregular, and the mass is immovable.

**Keywords:** Retroareolar breast tumors, Superficial infiltrating ductal carcinoma, Modified radical mastectomy, Tamoxifen.

## Introduction

Retroareolar breast tumors, also known as aberrant mammary glands, represent a condition where additional mammary tissue persists instead of degenerating during embryonic development [1]. Even though this condition is quite prevalent, malignancies arising from these glands are rare [2]. A case of a superficial breast tumor in a 54-year-old female presents a unique clinical scenario, and this case report aims to add to the body of knowledge concerning the diagnosis and treatment of such cases [3].

## Case Presentation

A 54-year-old female patient presented with a superficial breast mass in her left breast, which had been progressively growing for the past nine months. The mass had begun to ulcerate over the past month. Initially, the mass was approximately 1.0cm×1.5 cm. However, over time, the mass had expanded to 3.0cm×3.0 cm. The mass was hard, immovable, and had an unclear boundary with the surrounding skin. The patient reported increasing discomfort when the mass was touched. No enlargement of the ipsilateral supraclavicular lymph nodes was observed.

Diagnostic assessment Positron emission computed tomography (PET) [4] revealed a dense nodule in the left breast's subcutaneous tissue, with the boundary unclear and some sections protruding to the skin surface. The Standardized Uptake Value max level was 9.0 [5], suggesting a malignant tumor. No enlarged lymph nodes were observed. The histopathological examination confirmed the diagnosis of a Grade II superficial infiltrating ductal carcinoma [6]. The immunohistochemical examination revealed estrogen receptor (+++) 95%, progesterone receptor (+++) 90%, human epidermal growth factor receptor-2 (1+), ki67 (30% positive), and other markers typical for breast carcinoma [7].

Therapeutic intervention Following the confirmation of the diagnosis and after ruling out any contraindications, a decision was made to perform a modified radical mastectomy under general anesthesia [8]. This involved the resection of the tumor along with a margin of healthy tissue and dissection of the axillary lymph nodes [9]. The wound was thoroughly irrigated and dressed, and two drains were placed, one in the axilla and another near the surgical site.

Follow-up and outcomes Postoperatively, the patient was initiated on tamoxifen, an estrogen receptor modulator, as per the current guidelines [10]. The patient made an uneventful recovery and was discharged three days postoperatively. She reported minimal discomfort, and no complications such as infection or hematoma were noted. Regular follow-ups were scheduled every three to six months [11]. No signs of recurrence or metastasis were observed during the follow-up period.

## Discussion

This case highlights a rare presentation of a superficial breast tumor. The differential diagnoses for such a case would include be-

nign breast conditions such as fibroadenomas or cysts, infections, and other malignancies [12]. Pathological and immunohistochemical examinations played a vital role in confirming the diagnosis in this case [13].

The treatment approach for such a case is primarily surgical, followed by appropriate adjuvant therapy based on the pathological and immunohistochemical findings [14]. Despite the rarity of such cases, they underscore the importance of a thorough examination and a high index of suspicion for any breast lumps, whether in the typical mammary region or in retroareolar breast tissue. Early detection is crucial in managing such cases, as timely intervention can help prevent disease progression and metastasis. As with any breast cancer, the treatment regimen typically involves surgery, chemotherapy, radiation therapy, and targeted therapy, depending on the staging and the patient's overall health condition [15].

In our case, the patient underwent a mastectomy with axillary lymph node dissection, followed by adjuvant chemotherapy and radiation therapy. The importance of pathological examination in

these cases cannot be overstated, as it not only confirms the diagnosis but also informs about the tumor's molecular characteristics [16]. These molecular characteristics can further guide the use of targeted therapy, such as hormone therapy in hormone receptor-positive breast cancers or monoclonal antibodies in HER2-positive breast cancers. In this patient, immunohistochemical analysis revealed triple-negative breast cancer, which necessitated the use of an aggressive chemotherapy regimen due to the absence of targeted therapy options.

This case also emphasizes the importance of patient education and awareness. Women should be encouraged to perform regular self-breast examinations and seek medical advice if they notice any abnormal changes, regardless of their location.

## Conclusions

This case report presents an atypical case of a superficial breast tumor in a 54-year-old woman, emphasizing the importance of maintaining a broad differential diagnosis when evaluating breast lumps [17]. Even though the superficial location of the tumor is rare, it reinforces the understanding that breast cancer can have varied presentations. The significant role of pathological and immunohistochemical examinations in confirming the diagnosis and guiding treatment decisions was highlighted in this case. Furthermore, the case underscores the importance of aggressive management in triple-negative breast cancers, given the lack of targeted therapy options [18].

Early detection remains key in managing such cases, and the necessity of public awareness and Education about regular self-breast examinations is paramount. Clinicians should maintain a high index of suspicion for breast cancer even in atypical presentations, as early diagnosis and appropriate management are crucial in improving

patient outcomes. This report adds to the existing literature on the varied presentations of breast cancer and may aid in the identification and management of similar cases in the future.

### Conflict Of Interest

The authors have no conflicts of interest to disclose.

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