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CASE REPORT

**Autoamputation of the Breast in Invasive Ductal Carcinoma:
A Case Report****Olusola-Bello MA*¹, Olatunji AA¹, Ayoade BA², Adekoya AO¹,
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Summary

Autoamputation is the spontaneous detachment from the body and elimination of an appendage or abnormal growth. Autoamputation of an organ due to malignancy has been reported in various organs, although its aetiopathogenesis has not been fully explained. Autoamputation of the breast is associated with late presentation and slow desmoplastic reaction in breast cancer. The patient was a 43-year-old Nigerian woman who presented with a one-year history of left breast mass diagnosed as triple negative invasive ductal carcinoma. She defaulted from hospital care but represented after autoamputation of the left breast. The case is reported to showcase the variations in the clinical course of breast cancers.

Keywords: Autoamputation, Breast cancer, Invasive ductal carcinoma, Peau d'orange, Surgical oncology.

Introduction

Autoamputation is the spontaneous detachment from the body and elimination of an appendage or an abnormal growth, such as a polyp. [1] Autoamputations of different body parts have been reported severally, and more commonly in the limbs and appendix of the intestine. Many autoamputations are caused by ischaemia resulting from the destruction of blood vessels feeding the appendage or organ. Once the vessels are destroyed, ischaemia leads to necrosis and gangrene. Autoamputation is often acquired but

may also be congenital. [2] We report a case of autoamputation of the breast in advanced breast cancer to highlight the variations in the clinical course and presentation of breast cancers.

Case Description

A 43-year-old para-4 premenopausal Nigerian woman presented to the Outpatient Clinic of Olabisi Onabanjo University Teaching Hospital, Sagamu, Nigeria, with a one-year history of left-sided breast swelling. On examination, there was

a mass in the upper and outer quadrant of the left breast. The mass measured 6cm by 8cm and was attached to the skin with *peau d'orange* changes. There was no palpable axillary mass. Histology and immunohistochemistry of the tissue biopsy showed triple negative invasive ductal carcinoma. Following the diagnosis, the patient discovered she was pregnant and defaulted from the clinic before any treatment was commenced.

While at home for 14 months, the left breast mass ulcerated, and the patient continued to dress the ulcer until the left breast fell off. Following the delivery of the baby, she represented at the hospital for management of the residual breast lesion. On examination, the left breast was no longer present, but a wide scar with fibrotic edges was seen in the left anterior chest wall. The right breast was swollen and tender, but no mass lesion was palpated (Figure 1).



Figure 1: Absent left breast and scar tissue replacement due to autoamputation. Fibrotic edges of the scar are seen in the left anterior chest wall.

The ultrasound examination of the right breast showed thickened subcutaneous tissue with prominent glandular tissue and benign enlarged axillary nodes (Figure 2). Enlarged metastatic nodes were seen in the left axilla, and the largest of the nodes measured 2.7cm x 1.5cm (Figure 3). A mammogram of the right breast showed glandular breast tissue with no mass lesion (Figure 4). A diagnosis of the left breast autoamputation from invasive ductal carcinoma with metastatic axillary nodes was made. She was counselled for chemotherapy.

Discussion

Autoamputation secondary to malignancy had been rarely reported in several organs, [3, 4] with breast autoamputation reported in a few cases. The earliest cases of autoamputation of the breast in the literature were reported in the 1970s: one was reported in 1975 by Mintz and Keinan [5], and two others by Kuten *et al.* in 1976. After that, one case each was also reported by Van der Bijl, [6] Agarwal and Sharma, [7] and Firat *et al.* [8] in the year 2008, 2009 and 2017, respectively, with three

other cases recently reported in Nigeria by Elenwo *et al.* [9] in the year 2020.



Figure 2: B-Mode ultrasound of the right breast showing thickened subcutaneous tissue with predominantly glandular tissue. No mass lesion or cyst was seen.

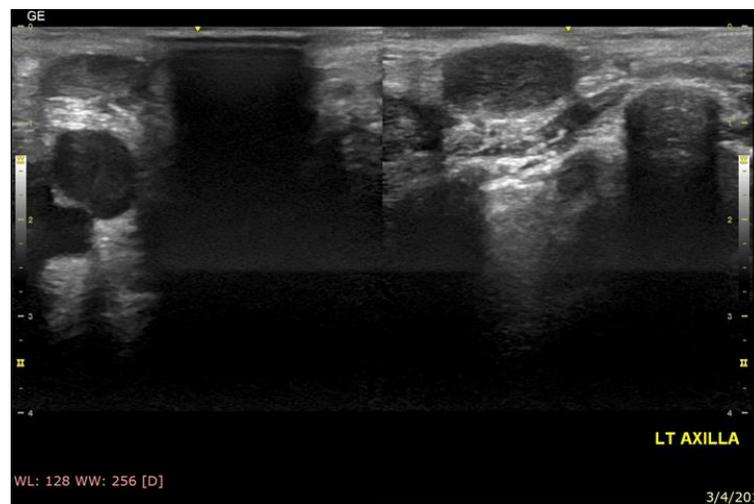


Figure 3: B-Mode ultrasound of the left axilla showing multiple, oval and round enlarged lymph nodes. The nodes have lost their echogenic center, typical of metastatic nodes.

The aetiopathogenesis of autoamputation of the breast remains incompletely explained but delayed presentation and diagnosis and slow desmoplastic and fibrotic reaction in the affected breast tissue have been considered responsible. [10] The index patient presented late with a large mass and defaulted for 14 months before

representing because she was pregnant. She decided to keep her pregnancy and only returned for care after delivery. This may be attributed to ignorance of the availability of safe chemotherapy drugs for the foetus. [11] The three cases reported in Port Harcourt, Nigeria [9] also defaulted, albeit for reasons of financial

constraint and trial of alternative methods of care, ignorance and false traditional beliefs.

Like in many other studies, the index patient was gravid, though she defaulted when she discovered she was pregnant. Pregnancy-associated breast cancer (PABC) refers to breast cancer diagnosed during pregnancy or within one year of delivery. [12] This is rare as only one out of every 3000 pregnancies is complicated by breast cancer. [13] Only about 10% of patients diagnosed with breast cancer below the age of 40 develop the disease during pregnancy. [14] The average ages of onset and duration of gestation

were reported as 33 years and 21 weeks, respectively, according to the European record on PABC, [15] though the index patient was 41 years old at the first presentation. She defaulted from care because she feared the possible adverse maternal and child outcomes associated with chemotherapeutic drugs. However, few studies have described PABC as being particularly aggressive due to low hormone receptor positivity. [14, 15] Some other reports, though few, have shown that breast cancer treatment is safe during pregnancy and supports pregnancy continuation during treatment. [13]

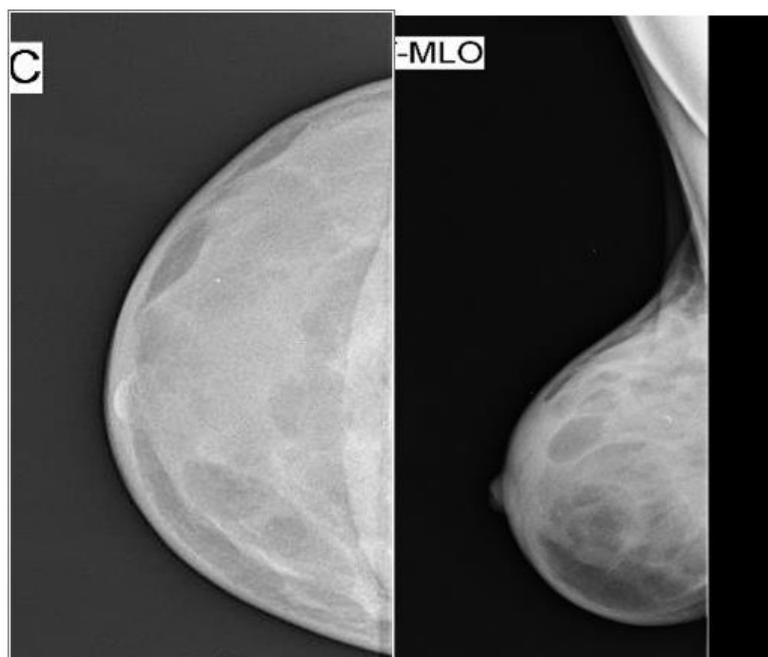


Figure 4. Mammogram of the right breast showing the craniocaudal (CC) and mediolateral (MLO) views. These demonstrate predominantly glandular tissue with mildly thickened overlying skin. No mass lesion or area of architectural distortion seen.

Most cases of breast autoamputation reported had presented with complete loss of breast tissue with large, ulcerated areas on the skin. Ergul *et al.* [10] presented a case with no ulceration but absent mammary tissue with retraction of skin and nipple. The index patient presented with a wide scar with fibrotic edges. The scar without prior treatment may be remarkable because pregnancy

and puerperium caused congestion that may have played a part in the amputation and healing. The histology of the breast lesion of the index patient showed invasive ductal carcinoma similar to all the reported cases, and it is reported to grow and spread rapidly. [7-9]

On ultrasound examination, the presence of metastatic nodes in the ipsilateral axilla indicates advanced disease and should require chemotherapy. [4, 10] Further radiological investigations like Magnetic Resonance Imaging (MRI) and Positron Emission Tomography/Computed Tomography (PET/CT) may demonstrate remnant malignant tissue in the anterior chest wall if present.[10]

Conclusion

The aggressive nature of breast cancer, if left untreated, may precipitate autoamputation of the breast. Public education on the need for screening for breast cancer, early diagnosis and prompt treatment cannot be overemphasized. The establishment of functional multidisciplinary teams for managing the psychological, social and clinical needs of individuals with breast cancer and tailoring their treatment to their needs and peculiarities is also essential.

Authors' Contributions: OBMA conceived the study and designed it along with OAA, AAO and OSB. All the authors participated in literature review, manuscript drafting, and revision for sound intellectual contents and approved the final version of the manuscript.

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