CASE SERIES: AUTO-AMPUTATION OF THE BREAST IN PATIENTS WITH ADVANCED BREAST CANCER

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ABSTRACT

Background: *Breast auto-amputation seems to be uncommon, with cases in literature reported in Israel, India, Turkey and South Africa.*

Objective: *To report a case-series of observed breast auto-amputation in patients with advanced breast cancer between 2016 and 2019 at the University of Port Harcourt Teaching Hospital.*

Methods: *Information was obtained from patients' medical records.*

Results: *Three cases were presented. Case 1 was a 58-year old female with histologic diagnosis of ductal carcinoma of the breast who defaulted for three years, represented in advanced stage, and latter had auto-amputation of the breast while on chemotherapy. Cases 2 and 3 had early histologic diagnosis of breast cancer, developed breast auto-amputation outside the hospital setting, and presented with advanced stages for treatment.*

Conclusion: *Late presentation of breast cancer patients following preference for alternative care is an issue that requires attention. Inability to afford conventional cancer care is a common denominator in this case-series. There is therefore need for establishment of regional centres for subsidized breast cancer treatment in Nigeria.*

Keywords: *Breast, auto-amputation, breast cancer.*

INTRODUCTION

Amputation, derived from the Latin word "amputare" which means "to cut away", though commonly the domain of orthopedics as it affects the limbs, also finds expression in other disciplines. Amputations of different parts of the body have severally been reported. "The deliberate alteration or destruction of body tissue without conscious suicidal intent" was the definition for self-amputation advanced by some writers.[1] Self-amputations have been reported among non-psychotic[2] and psychotic individuals. This is different from auto-amputation, a "spontaneous detachment from the body and elimination of an appendage or an abnormal growth, such as a polyp".

There has been few reports of breast autoamputation and it seems to be

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uncommon.[7] It has been reported in Israel, India, Turkey and South Africa. In 1975 Mintz & Keinan reported autoamputation of the breast described as tissue decay. Similar auto-amputation of the breast occasioned by the progressive effect of malignant melanoma of the nipple was reported in 1976 by Kuten *et al.* In 2008 a report of 58-year old female who presented to the out-patient clinic with a history of bloody nipple discharge from the left breast, associated left breast ulcer and breast falling-off about 4months prior to presentation at the hospital, was reported. Another case of auto-amputation was reported by Firat *et al*. in Turkey involving a 73-year old female who presented to the emergency department with dyspnea, absent right breast and a scar in the breast region for which biopsy proved to be breast cancer. This implies that the auto-amputation occurred before presentation at the hospital.

The mechanism of breast auto-amputation appears not to have been fully described, especially as it affects late presentations of breast cancers in our sub-region. Apoptosis and oncosis have been reported to be observed in ultra-structural studies. Hence, Van der Bijl[9] advocated that auto-amputation begins with necrosis of the skin and breast supporting tissues adjacent to the tumors following which extensive destruction of deep and superficial tissues results in detachment of a part of the breast from the chest wall.

This case-series report breast auto-amputation amongst patients with advanced breast cancer between 2016 and 2019 at the University of Port Harcourt teaching Hospital – a tertiary healthcare facility in Port Harcourt, Nigeria, to further add to the literature of this rather uncommon phenomenon.

CASE 1

A 58-year old caterer presented with a fungating right breast mass with associated bloody nipple discharge, fixed ipsilateral axillary nodes and dyspnoea. The left breast was normal. Excision biopsy done 3 years before presentation showed ductal carcinoma in-situ (comedo type). She was multiparous with no family history of breast cancer. Staging investigations revealed a right pleural effusion and a hypoechoic nodule on ultrasound scanning of the right hepatic lobe. She had refused mastectomy when the diagnosis was first made. She had a closed tube thoracostomy drainage with pleurodesis, followed by chemotherapy with paclitaxel, epirubicin, and capecitabin (xeloda). The first cycle of these resulted in significant shrinkage of the mass with eventual amputation, leaving an ulcerated residual lesion on the chest wall. She was discharged for out-patient follow-up after 3 cycles of chemotherapy.

CASE 2

A 46-year old obese female trader presented in our hospital on different occasions over a 16-month period with a right breast mass that had increased in size from when it was first noticed. At the last presentation she had a fixed ulcerated lesion on the right breast region with a part of the right breast auto-amputated. The ipsilateral axillary nodes were matted and fixed. She had significant

weight lost, but did not complain of cough or chest pain. A biopsy revealed invasive ductal carcinoma (SBR 2). Staging investigations did not yield significant findings. She had chemotherapy consisting of paclitaxel, epirubicin, and capecitabin (xeloda), but defaulted again after the first cycle. She presented again after 3 months with liver and lung metastasis and finally succumbed.

CASE 3

An acutely ill-looking 33-year old mother of four in respiratory distress presented to us with gross asymmetry of the breasts. She had declined an offer of mastectomy about 18months earlier after a histology report of excision biopsy of a previous lump on the same breast showed presence of cancer (invasive ductal carcinoma). She had resorted to use of some herbal topical and oral medications until part of the right breast fell off about two months before the second presentation. The left breast was significantly bigger than the right which showed a fungating indurated breast fixed to the chest wall. The right axillary nodes were enlarged, matted and fixed. A repeat biopsy however showed medullary carcinoma and immunohistochemistry profile of oestrogen receptor(ER) negative, progesterone receptor(PR) negative and HER-2 positive. A chest radiograph showed massive right pleural effusion. She had a right tube thoracostomy and pleurodesis, followed by 6 cycles of chemotherapy (paclitaxel, epirubicin and capecitabin). She did well and was discharged for adjuvant radiotherapy. She has been lost to follow-up.

DISCUSSION

In the three cases presented, there was a definite diagnosis of breast cancer, with breast auto-amputation occurring in the hospital in case 1 while on chemotherapy, whereas it occurred at home in the second and third cases. This is similar to the earlier cases reported by Van der Bijl.[9] Case 3 presented as an emergency, with auto-amputation having already occurred. This is similar to that reported by Firat *et al.*[10] Apart from breast auto-amputation, all cases in this case series have someother observations in common: they had early diagnosis of breast cancer; abandonment of conventional care; a trial of alternative methods of care (herbal); all became advanced cancer; all had ulcerated breast lesion; further

complications such as distant metastasis with severe anemia, or death; hormone receptor status determination issues and or inability to procure Trastuzumab when HER-2 is positive.

Some common conclusions can be arrived at here. First is that breast auto-amputation is not as a result of chemotherapy. Secondly, it is a phenomenon seen in advanced cancer of the breast. All our patients as well as those reported by Vander Bijl[9] and Firat *et al*.[10] had advanced disease. The mechanism of breast auto-amputation is not quite clear but it is suggested to be due to necrosis of the skin and tissues of the breast, as well as that of the tumor itself.[11] Late presentation, abandonment of conventional care with resort to alternative methods, ignorance and false traditional beliefs all lead to this phenomenon as can be seen from these cases presented. Also, non-affordability of cancer treatment is peculiar in our environment as our three patients have this as part of the reasons for late presentation.

Metastatic breast cancer is known to have a median survival of 2years and the goal of management is essentially palliative (disease control, palliation of symptoms, and maintenance of the highest quality of life).[16] Treatment thereof may prolong survival and improve quality of life. Hormonal therapy is often preferred in metastatic breast cancer due to minimal toxicity, and cytotoxic chemotherapy is key in patients with hormone receptor negative cancers.[17-19] While anatomically localized problems could benefit from individualized surgical resection, performing surgical resection of the locoregional in stage IV breast cancer is debatable, although systemic chemotherapy is advised with such surgery reserved for symptom palliation of individual patient.[20-22] All the three patients presented had metastasis. In existing axillary disease, it has been demonstrated that the recurrence rate following axillary lymph node dissection does not differ significantly from that of locoregional irradiation, hence the advice to avoid the morbidity of surgery in these patients.[23]

Not all of these patients were able to do immunohistochemistry and the luminal type therefore could not be determined. However, case 3 had ER negative, PR negative and HER 2 positive - HER2-enriched. This sub-type of breast cancer tends to grow very fast and are sensitive to trastuzumab.[24,25] They are also likely to auto-amputate. It should be noted that treatment of metastatic breast cancer is generally challenging with sometimes some unanswered questions.[26] This is compounded when for some reasons necessary aid to diagnosis and treatment (e.g. immunohistochemistry) is not available.

CONCLUSION

Aside from public education to create awareness on the need for screening for breast cancer, there appears to be an emerging need to emphasize on the dangers of delayed treatment in favor of alternative care. It is also worthy of note that the common denominator in this case-series that contributed to delay in conventional treatment for breast cancer appears to be issues of affordability, hence there is a need for establishment of functional regional

centers (in geo-political zones) for subsidized cancer treatment in Nigeria. We also agree with Agarwal *et al* who concluded that a good outcome is only obtainable if patients are made to change their social attitude and come out of their ignorance.

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