



ADVANCED BREAST CANCER IN NIGERIA: A SINGLE CENTRE EXPERIENCE

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ABSTRACT: Background: Breast cancer is the most common cancer globally and in Nigeria, it constitutes about 12% of all new cancers and 25% of all cancers in women. In Nigeria, the majority of patients present with late disease and globally, advanced breast cancer is associated with a low survival rate among patients. This study seeks to review the presentation of advanced breast cancer as seen in the University of Port Harcourt Teaching Hospital, Southern Nigeria. **Patients and Methods:** This is a 5-year retrospective study conducted at the University of Port Harcourt Teaching Hospital. Records of patients that presented to the hospital within the study period with histologically proven breast cancer (stages 3 and 4) were retrieved, and relevant data extracted and analysed using SPSS version 22. **Results:** There were 47 patients with advanced breast cancer and they were all females. Their ages ranged from 25 to 72 years with a mean of 43.9 ± 4.7 and peak age of 31–50 years. Majority of the patients (72.3%) had stage 3 disease while 13 (27.7%) of them had stage 4. The lung was the commonest metastatic site and this was seen in 7 (14.9%) patients, followed by the liver in 1 (2.1%). **Conclusion:** Advanced breast cancer remains a dreaded disease that reduces patients' quality of life significantly and may also be rapidly fatal. Community-based efforts in collaboration with Non-Governmental Organizations (NGOs) targeted at information dissemination to the public, and offering breast cancer screening and subsidized cancer treatment are essential to reduce the mortality associated with this deadly disease.

KEYWORDS: Presentation, advanced breast cancer, University of Port Harcourt Teaching Hospital.



INTRODUCTION

Female breast cancer has now surpassed lung cancer as the leading cause of global cancer incidence in 2020, with an estimated 2.3 million new cases, representing 11.7% of all cancer cases, and ranking fifth as the leading cause of cancer mortality worldwide^{1,2}. In Nigeria, it constitutes about 12% of all new cancers and 25% of all cancers in women¹.

Incidence rates in sub-Saharan Africa have also been on the increase². In Zaria, every 1 in 5 cases of breast lump at the Ahmadu Bello University Teaching Hospital is malignant³. It has been documented that the majority of patients in Nigeria present late with advanced disease^{4,5}. Low survival rates in sub-Saharan Africa are largely attributable to this late-stage presentation. According to a report summarizing 83 studies across 17 sub-Saharan African countries, 77% of all staged cases were stage III/IV at diagnosis⁶. The reasons for the late presentation include low level of literacy, cultural and religious beliefs, ignorance, high poverty rate and absence of organized, population-based mammography screening programs amongst others⁷. A recent study conducted in 5 sub-Saharan African countries estimated that 28% to 37% of breast cancer deaths in these countries could be prevented through earlier diagnosis of symptomatic disease and adequate treatment, with a fairly equal contribution of each⁸. All over the world, advanced breast cancer is associated with a low survival rate among patients^{9,10}. In such patients, the aim of treatment is palliative with improvement in the quality of life, symptom control and prolonging survival as the main objectives¹¹. This study reviews the presentation of advanced breast cancer in the University of Port Harcourt Teaching Hospital.

PATIENTS AND METHODS

This is a 5-year retrospective study conducted at the University of Port Harcourt Teaching Hospital between 1st January, 2013 and 31st December, 2017. Records of patients that presented to the Hospital within the study period with histologically confirmed breast cancer were retrieved. Relevant data which included age, age at menarche, menopausal status, parity, breastfeeding history, family history of breast cancer, stage of disease, presenting symptoms and metastatic sites were extracted and analyzed using Statistical Package for Social Sciences, Version 21.

RESULTS

There were 47 patients with advanced breast cancer within the study period and they were all females. Their ages ranged from 25 to 72 with a mean of 43.9 ± 4.7 and the peak age incidence was 31–50 age range (See table 1). Only 1 (2.1%) had a family history of breast cancer (See table 1). Their ages at menarche ranged from 11 to 18 years with a mean of 14.1 ± 1.2 . Twenty-seven (57.4%) patients were premenopausal while 20 (42.6%) of them postmenopausal (See table 1). Only 7 (14.9%) of the patients were nulliparous. The others are as shown on table 1. Forty two (89.4%) patients breastfed their children for an average of 1 year. The right breast was the most commonly involved site and this was seen in 25 patients (53.2%). In 19 (40.4%) patients, the cancer was on the left breast and it was bilateral in 3 (6.4%) (See table 1). Majority of the patients (72.3%) had stage 3 disease while 13 (27.7%) of them had stage 4.



Painless breast lump was the commonest presenting symptom and this was seen in 38 (80.6%). Other presenting symptoms are as seen on table 2. The lung was the commonest metastatic site and this was seen in 7 (14.9%) patients, followed by the liver in 1 (2.1%). The other metastatic sites are as shown on table 3.

Table 1: Patient and Disease Characteristics of Breast Cancer Patients

Variable (n-47)	No of patients (%)
Age range of patients	
14–20	6 (12.8)
21–30	14 (29.8)
31–40	14 (29.8)
41–50	16 (35.7)
51–60	1 (2.1)
61–70	2 (4.3)
71–80	
Age at menarche	
<12	3 (6.4)
>/= 12	24 (51.1)
Menopausal status	
Premenopausal	27 (57.4)
Post-menopausal	20 (42.6)
Parity	
Nulliparous	7 (14.9)
1–4	21 (44.7)
>/= 5	19 (40.4)
Breast feeding	
Yes	42 (89.4)
No	5 (10.6)
Variables (n-47)	No of patients (%)
Stage	
3	34 (72.3)
4	13 (27.7)
Family history	
Yes	1 (2.1)
No	46 (97.9)

**Table 2: Presenting symptoms**

Symptoms	No of patients (%)
Breast lump	
Painless	38 (80.9)
Painful	4 (8.5)
Fungating mass	7 (14.9)
Serous nipple discharge	1 (2.1)
Bloody nipple discharge	1 (2.1)
Dyspnea	2 (4.3)
Cough	1 (2.1)
Chest pain	1 (2.1)
Pleural effusion	1 (2.1)

Table 3: Metastatic sites

Site	No of patients (%)
Lungs	7 (14.9)
Liver	3 (6.4)
Peritoneum	1 (2.1)
Bone	1 (2.1)
Brain	1 (2.1)

DISCUSSION

Advanced breast cancer confers a huge burden on the patient, doctor and the healthcare system. Developed countries place emphasis on screening and this has led to early detection over the past 3 to 4 decades¹². Conversely, in some developing countries like Nigeria, in addition to the limitation of resources, routine screening for breast cancer is not a common practice and many patients still present late. The mean age of 43.89 and peak age incidence of 31–50 years are similar to previous reports from Nigeria¹². Generally, it has been reported that breast cancer presents much earlier in Nigeria and most other African countries than it does in the Western population^{13,14}. Most of the patients (80.9%) had painless breast lump as the first symptom. In agreement with previous findings, the painless nature of the lump (as a result of being ignored) might have contributed to the late presentation with worsening prognosis^{15,16}. It has been documented that about 15–20% of all breast cancer cases are familial¹⁷. In our study, only 2.1% of the patients reported a family history of breast cancer. The rest either did not have or were unaware of a family history. It is possible that absence of family history in the patients might have also contributed to the delay in presentation. This is because relevant family history is expected to trigger more rapid evaluation and a self-detected breast complaint^{16,18}. The bone has been reported to be the commonest metastatic site following advanced breast cancer¹⁹. Patanaphen *et al.* reported the bone as the commonest site in 51% of their patients followed by the lungs in 17%.²⁰ Schneider *et al.* also reported the bone as the commonest site of spread and this was found in 14.7% of patients followed by the liver in 5.7%.²¹. In our study, the lungs were the commonest site and this was found in 14.9% of our patients followed by the liver in



6.4%. The bone was involved in only 2.1% of cases. This variation observed in this study might be due to the fact that there is no facility for skeletal scintigraphy in our centre. This imaging modality might have detected more cases of bone metastasis because it is more sensitive than skeletal x-ray which requires a loss of 30–75% normal bone mineral content before the osteolytic lesions become apparent^{22,23}.

CONCLUSION

Advanced breast cancer remains a dreaded disease that reduces patients' life expectancy and quality of life significantly. Community-based efforts in collaboration with non-Governmental organizations targeted at information dissemination to the public, and offering breast cancer screening and subsidized cancer treatment are essential to reduce the mortality associated with this disease.

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