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Breast Cancer among Urban Nigerian Women: Appraising Presentation and the Quality of Care

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Abstract

Introduction: Late presentation is the hallmark of breast cancer among Nigerians. Awareness of the disease is low and care of this condition has not received adequate attention from Government. Health education to improve awareness was intensified in the last 2 decades. This study aims to assess the current state of care and presentation of breast cancer in Lagos, Nigeria.

Patients and Methods: A prospective study of 350 breast cancer patients seen over a period of four years at a General Surgical unit out-patient clinic of LASUTH was carried out. Data on patient characteristics, presentation, diagnosis and treatment were obtained and analyzed.

Results: Average duration of symptoms was 46.48 weeks. One fifth presented within 3 months while 17% presented after 1 year. Lumps were self-detected in 96% and 287 (82%) presented with advanced disease (stages III & IV). Two hundred and thirty seven patients (67%) received treatment and 175 (74%) among them had mastectomy. None had breast conservation surgery. One hundred and fourteen patients (48%) absconded and did complete treatment.

Conclusion: The trend of late presentation has not changed with current efforts to improve breast cancer awareness. Quality of care for our breast cancer patients is not satisfactory and needs improvement.

Introduction

Breast cancer is the most common female malignancy worldwide and a leading cause of cancer deaths [1]. In Nigeria, it has become the most common female cancer, taking over from cervical cancer [2]. Current estimates put the prevalence of this condition in Nigeria at 116 cases per 100,000 women/year [2]. This rate is higher than 33.6/100,000 women reported less than 2 decades ago [3]. In advanced countries, majority among breast cancer patients present with early stages due to better awareness and adoption of breast cancer screening methods [1]. In contrast, more than two-third among breast cancer patients in Nigeria and many developing nations present late when the disease is already advanced [2, 4, 5]. Breast cancer patients in Nigeria are younger; presenting a decade earlier than their Caucasian counterparts [2]. In addition, studies on biological characteristics of breast cancer showed that it tends to be more aggressive in black women [6]. These features portray poor prognosis for this condition in Nigerian women with breast malignancy.

Currently, facilities for breast cancer screening and treatment in Nigeria are grossly inadequate and resources available to government are used largely to

tackle the challenges of communicable diseases such as HIV/AIDS, Tuberculosis, Malaria and reduction in maternal mortality. Following the establishment of Nigeria cancer society in 1968, other non–governmental organizations like the breast cancer association of Nigeria (BRECAN), the bloom Cancer and Support Centre and Princess Nikky breast cancer foundation were formed to promote breast cancer awareness and offer support to victims of the disease in the country. In addition, regular mass screening of women in their places of work, markets and worship centres employing clinical breast examination (CBE) was commenced by Lagos State government about a decade ago.

We therefore prospectively studied the characteristics, presentation and quality of care of breast cancer patients seen at the out-patient clinic of a single general surgical unit of the Lagos State University Teaching Hospital (LASUTH), Ikeja-Lagos, Nigeria between January 2006 and December 2009. The objective is to assess the current state of breast cancer care and presentation in Lagos, a highly urbanized State in Nigeria. This may assist in defining the gaps in breast cancer detection and treatment in our community. It may also help in identifying areas where improvement are needed.

Methods

All patients with breast cancer presenting to one of LASUTH, General Surgical Clinics between January 2006 and December 2009 were prospectively studied. Informed consent was obtained and the hospital Research and Ethics committee approved the conduct of the study. Information obtained included age, sex, marital status, occupation, level of education, reproductive and social histories of the patients. Presenting complaint(s), duration of symptoms, mode of lump detection, history of past breast lesions and family history of breast disease were also documented.

Tumours were clinically assessed and biopsies were taken for either histological or cytological diagnosis. Assessment of metastases was done by chest X-ray and abdominal ultrasonography and where indicated, skeletal X-ray and CT scan. Staging was done using the American Joint Committee on Cancer (AJCC) method [7]. Patients whose lesions were amenable to surgery were offered simple mastectomy and level II axillary clearance after which they were all sent to the Oncology Unit for adjuvant chemotherapy and radiotherapy. Those with advanced diseases that were not suitable for immediate surgical intervention were referred to the Oncologist after diagnosis for neo-adjuvant chemotherapy. Radiotherapy was recommended for patients with T4 lesions, N_2 or N_3 nodal stage, primary tumour of 5cm or more with positive axillary lymph node, axillary lymph node of >2.5 cm in diameter and Pectoralis muscle Fascia involvement. Patients were referred to another centre for radiotherapy because the facility was not available in our hospital. They were followed up at the oncology clinic and outcomes of treatment were documented. Data was analyzed using SPSS version 15.0. Frequency tables were drawn; means and proportions were also calculated.

Results

Characteristics of Breast Cancer Patients

A total of 350 new cases of primary breast cancer were seen during the study period. Age ranged from 23 to 104 years with a mean of 48.93 years (SD ±

Table 1: Characteristics of breast cancer patients in LASUTH (n = 350).

		No	%
Age group (years)	20 – 29	10	2.9
	30 – 39	86	24.6
	40 – 49	98	28.0
	50 – 59	68	19.4
	60 – 69	62	17.7
	70 – 79	22	6.3
	> 80	4	1.1
Sex distribution	Females	344	98.3
	Males	6	1.7
Marital status	Married	326	93.0
	Single/widowed/divorced	24	7.0
Level of education	Illiterate	77	22.0
	Primary	90	26.0
	Secondary	88	25.0
	Tertiary	95	27.0
Occupation	Self-employed	266	76.0
	Civil/public servants	56	16.0
	Others	28	8.0
Number of children	None	14	4.0
	1 – 4	199	57.0
	> 4	137	39.0
Menopausal status	Pre-menopausal	224	64.0
	Post-menopausal	126	36.0

13.365). Table 1 shows socio-demographic features of the patients.

Clinical Presentation

Three hundred and forty eight patients (99.5%) presented with breast lumps. Lumps were detected by the patients in 95% cases. In 11 patients (3%), lumps were detected by the doctor during examination for other complaints while in 4 patients (1%), they were detected by the husband. Lumps in 4 patients (1%) were discovered through clinical breast examination during government sponsored mass screening exercises. Other associated presentations include breast ulceration in 18%, breast pain in 5%, nipple retraction in 3%, bloody nipple discharge in 2% and axillary mass in 0.5%.

Table 2: Distribution of symptoms duration.

Duration of symptoms (months)	Number of Patients	Percentage
< 1	14	4
1 – 3	56	16
>3 – 6	88	25
>6 – 12	133	38
>12 – 24	38	11
>24	21	6
Total	350	100

Duration of symptoms among patients ranged from 3 weeks to 6 ½years. Average duration of symptoms was 46.48 weeks (SD ± 51.97). One-fifth presented within 3 months while 17% presented after 1 year (Table 2). Right breast alone was affected in 157 patients (45%) and left breast alone in 144 patients (41%). In 49 patients (14%), both breasts were affected at presentation. Stage of tumour at presentation is shown in Table 3.

Table 3: Clinical stage of tumours at presentation.

Clinical stage of tumour	Number of patients	Percentage
I	20	5.7
IIa	16	4.6
IIb	27	7.7
IIIa	39	11.1
IIIb	152	43.5
IIIc	6	1.7
IV	90	25.7
Total	350	100

Pathology

Histological diagnosis was made in 296 patients (85%) while the rest (15%) had cytological diagnosis by Fine Needle Aspiration Cytology (FNAC). Invasive ductal carcinoma was the most common histological type accounting for 93% followed by invasive lobular carcinoma seen in 3%.

Treatment

Two hundred and thirty seven patients (67%) received treatment in our hospital while 113 patients (33%) did not report for treatment after diagnosis. Among those that were treated, 175 (74%) had simple mastectomy and axillary clearance. All of them commenced adjuvant chemotherapy after surgery. Sixty two patients (26%) whose lesions were not suitable for surgery had neo-adjuvant chemotherapy. Adriamycin and cyclophosphamide combination was used in 72% of cases while 22% had cyclophosphamide, methotrexate and 5 fluorouracil (CMF) combination. All patients that received treatment were placed on oral tamoxifen empirically because our centre lacks facilities to assess hormone receptor status. One hundred and eight patients (46%) were referred for radiotherapy following completion of chemotherapy. A total of 114 patients (48%) among those that commenced therapy did not complete treatment. Forty five out of the 114 patients (39%) defaulted during the course of chemotherapy while the remaining 69 patients (61%) were not seen again at the clinic after referral for radiotherapy.

Outcome

Among 123 patients who did not default, 8 (6.5%) died before completion of treatment and only 115 (93.5) completed prescribed therapy. Another thirty patients (24%) died after completion of treatment; making a total of 38 deaths during the study period. Sixty seven patients (54.5%) are still alive and attending clinic while 18 (15%) stopped attending clinic. Reasons for stopping clinic attendance could not be ascertained.

Discussion

Painless breast lump is the dominant presenting complaint in our patients and they were self-detected in nearly all cases. Substantial proportion of breast cancer is detected by mammography screening in communities with high level of awareness. In Singapore, for example, 13.4% of breast cancers were screen detected [8]. In this study, only 4 patients (1%) were found to have breast cancer through mass screening employing CBE. Less than half among the patients presented within 6 months. Earlier study conducted in Lagos more than a decade ago showed that 36% reported within 6 months after observing breast cancer symptoms [9]. Late presentation is a notable feature in breast cancer patients in developing countries [4, 5]. This has been a persistent feature of breast cancer presentation in Nigeria over the past 4

decades [2, 3, 10]. Studies have shown that fear of mastectomy, ignorance of the seriousness of painless breast lump, preference for traditional treatment, belief in spiritual healing and economic reasons are the main cause of late presentation of breast cancer patients in Nigeria and Ghana [11, 12]. Eighty two percent among breast cancer patients in our centre presented with advanced disease (Stages III & IV). This figure is higher than what was reported more than a decade ago when 77% among breast cancer patients in Lagos presented in late stages [9]. Reports from other centres in Nigeria over the years showed that majority, ranging from 64% to 95% presented with late stages of the disease [2, 3, 10, 13]. Fourteen percent had bilateral breast involvement at presentation in this study. Involvement of both breasts at presentation ranged from 1% to 9% in previous studies among breast cancer patients in Nigeria [3, 9, 10, 13].

Breast cancer awareness remains low among Nigerian women [14]. Patients continue to present late even when lesions are discovered early. Efforts by government and non-governmental agencies towards raising awareness and encouraging early presentation of the disease appear ineffective so far. Observed increase in the proportion of bilateral breast cancer at presentation in this study further reinforces this belief. Lagos has the largest concentration of both print and electronic media outfits used in breast cancer information dissemination in Nigeria. Furthermore, majority of the patients in the study are literate. All these do not appear to have made positive impact regarding breast cancer awareness. Communities have adopted different types of approaches towards achieving increased awareness about breast cancer. Individual–level interventions by written information, telephone counselling or interactive computer programme were tried but found to promote cancer awareness over short term only. There was no evidence that they promote early presentation with cancer symptoms [15]. However, community–level intervention through small group educational programmes, health promotion programmes in work places, health clubs and leisure centres was found to promote cancer awareness and presentation at an early stage [15]. There is need for studies aimed at identifying effective ways to achieve better awareness and early presentation of breast cancer patients in our community.

Two-third among those diagnosed as having breast cancer eventually received treatment in our hospital. Simple mastectomy and level II axillary clearance were offered to those whose lesions were still operable. None had breast conservation surgery. This is a reflection of the advanced nature of breast cancer in our patients. Few that presented with early stages were not considered for conservation surgery largely because of non-availability of radiotherapy facilities in our centre. Breast conservation surgery is currently the most popular treatment for breast cancer, representing 75 – 80% of all operations [16]. In patients presenting with large primary tumours, primary chemotherapy has been utilized to reduce the size of the tumour and make the lesion suitable for breast conservation surgery [16]. Unfortunately, advanced stages at presentation and poor infrastructure for treatment of breast cancer have made this mode of surgical treatment less popular in many developing countries. None of the patients was offered plastic surgery for breast reconstruction following mastectomy due to late presentation and the necessity for prolonged follow-up before the reconstructive procedure. Breast reconstruction after mastectomy for breast cancer has become a standard procedure. In a report, 42% among patients undergoing mastectomy had breast reconstruction with 95% being performed at the time of mastectomy [17]. Awareness about the availability of expertise and facilities for immediate breast reconstruction after mastectomy may encourage early presentation for treatment among our patients.

All patients presenting for treatment had combination chemotherapy. This is an important component of breast cancer treatment and it is widely used in centres across Nigeria. One fifth among those offered chemotherapy defaulted and did not complete the course. Non adherence to chemotherapy is a major challenge in breast cancer treatment especially in resource poor settings. Reasons for non-adherence include financial difficulty, relatively feeling well after commencement of chemotherapy, resorting to alternative treatment and drug side effects [18]. Only one-third among patients who were referred to the Radiotherapist reported to the oncology clinic after completion of radiotherapy. Access to radiotherapy is a serious handicap to breast cancer treatment in developing countries. In Nigeria, a country with over 140 million inhabitants, there are only 5 functional radiotherapy centres. The high cost of this mode of treatment which is beyond what an average breast cancer patient can afford might have contributed to the non-compliance.

Generally, high default rate was observed in this study. Thirty-three percent did not present for treatment after diagnosis was made while 48% among those that commenced treatment did not complete therapy. Default

after diagnosis and during treatment for breast cancer is common among patients in Nigeria. In an earlier study in Lagos, one-third among breast cancer patients was lost to follow-up [9]. Similarly high rate of default was reported by Adesunkanmi et al in Ile-Ife, Nigeria [13]. In Accra, Ghana, one-third among breast cancer patients was lost to follow-up [19]. In addition, reasons for absconding were found to be similar to that for late presentation to the hospital [12].

Conclusion and recommendation

Breast cancer patients in Lagos present late with advanced stages of the disease. Awareness campaigns and health education have so far failed to change this trend in majority of patients. A new approach to breast cancer information dissemination that will address already known causes of late presentation and enhance early detection and presentation is desirable. Quality of care for our breast cancer patients needs improvement. Provision of adequate facilities for early diagnosis and treatment particularly, radiotherapy machines are necessary. High default rate after diagnosis and during treatment observed in this study is worrisome. This may be partly due to misconceptions about breast cancer treatment. It should be addressed by adopting new strategies that will encourage patients to take up and complete their treatment accordingly. Default may lessen if cost of treatment is reduced and made affordable.

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