ORIGINAL RESEARCH ARTICLE

Pattern of Presentation and Problems of Breast Cancer in Port Harcourt, Nigeria

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ABSTRACT

Introduction: African American women have been reported to have breast cancers at an earlier age and with more aggressive, hormone receptor negative tumours. They also tend to present with more advanced stage breast cancer traceable to lower utilization of screening services, as well as socioeconomic and cultural factors. Study aimed to investigate the pattern of presentation of breast cancer and the problems of breast cancer care as seen in the surgery department of the university of Port Harcourt Teaching Hospital from January 2019 to July 2020.

Material and Methods: A descriptive retrospective cross-sectional study carried out in Port Harcourt, on patients who were diagnosed with breast cancer at the surgery department of the hospital. Registers and patients' medical records were the sources of data collected over the 19 months from January 2019 to July 2020.

Results: The ward admission rate varies from 1:137 to approximately 1:10. A total of 661 clinic cases were seen and only 116 were on National Health Insurance Scheme, giving a ratio of 1:5.7.

All breast cancer admissions were advanced numbering 126. The commonest histopathologic pattern was invasive ductal carcinoma grade I with 61 out of 100 documented over 19month period, and triple negative tumors were predominant immunohistochemistry pattern.

Conclusion: Invasive ductal carcinoma with triple negativity in patients presenting with advanced tumors are the most common pattern we see, and most of our patients have no health insurance coverage and are unable to cope with the cost of care. Establishment of regional cancer centers with subsidized care will help these patients.

Keywords: Breast Cancer, Pattern of Presentation, Problems, Port Harcourt, Nigeria.

INTRODUCTION

Breast cancer is heterogenous in nature varying from region to region, and the hormone / epidermal receptor status of the tumors have been exploited in treatment regimen.[1] Many subtypes of breast cancer have been identified using DNA microarrays.[2] However, some of the tumors tend not to express these receptors and run an aggressive course with higher risk of morbidity and mortality.[3-5] A multimodal approach comprising surgery, chemotherapy, hormonal therapy, targeted therapy, and radiotherapy is often deployed tailored to patient-specific care.[6] The total care for breast cancer is capital intensive and insurance coverage helps to mitigate out-of-pocket expenses which are burdensome to most patients.[7]

In the United States, black women have been reported to have breast cancer at an earlier age with more aggressive hormone receptor negative tumors.[8] They also tend to present with more advanced breast cancer due to lower utilization of screening services, as well as socioeconomic and cultural factors.[9] This is also the case in Nigeria,[10, 11] Malasia,[12] and in the Caribbean.[13] Lower educational level, less income, poverty, less emphasis on sociocultural variables have been found to be contributory factors.[14]

The aim of this study is to investigate the pattern of presentation of breast, establish the histopathologic/ immune-histochemistry features of breast cancer and highlight the problems of the breast cancer care as seen in the surgery department of the university of Port Harcourt Teaching Hospital from January 2019 to July 2020.

METHODOLOGY

This was a descriptive retrospective cross-sectional study carried out at The University of Port Harcourt Teaching Hospital, a tertiary healthcare facility in Port Harcourt using the clinic / ward registers and patients' medical records. Data was collected from all patients who were diagnosed with breast cancer at the surgery department of the hospital, who constituted the study population. The admission and discharge registers in the surgical wards was used to identify patients who were admitted and treated for breast cancer over the 19 months from January 2019 to July 2020. The Medical

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records of these patients were then used to obtain data for the study, complimented by reports from histopathology department. The study data was scrutinized by all the authors for authenticity or otherwise before use. Patients whose records could not be obtained were excluded from the study.

RESULTS

Table 1 shows the month by month attendance of patients at the out-patient clinic including both benign and malignant lesions. This spectrum indicates the number of attendances, which is not exclusive as the same patient seen in one month may be seen again and included in the data for the following month. The admission rate varies from 1:137 to 16:167 (which is approximately 1:10).

Breast cancer constituted 26.17% of all cases seen in the breast clinic in 2019, and 33.88% so far in 2020, (see Table 2) giving a percentage of 29.08% in the 19months in reference. Table 2 also shows the spectrum of attendance at the breast clinic of the surgical out patient. Of particular interest is the significant discrepancy in the patients who were on National Health Insurance Scheme (NHIS) and the total number of patients who were diagnosed with breast cancer. A total of 661 cases were seen compared with 116 who were on NHIS, giving a ratio of 1:5.7. Additionally, not all treatment measures are covered by the NHIS for these cancer patients. Table 3 highlights the month-by-month pattern of admissions to the female surgical ward. The total number of breast cancer cases on admission at the ward over the 19-month period was 129 out of 638 total ward admissions. This give a ratio of 1:5. There was no single admission for an early breast cancer, but locally advanced and metastatic breast cancer numbering 56 and 70 respectively. Out of the 661 breast cancer cases seen in the clinic during the period, only 129 of them could get into the wards despite their advanced stage giving a percentage of 19.51%.

Table 4 shows the histopathologic pattern of breast cancer seen in our center. The commonest histopathologic pattern is invasive ductal carcinoma grade I. Out of the one hundred (100) cases documented over 19-month period, 96 were invasive ductal carcinomas, with 61 of them being grade I.

Table 5 shows a detailed summarized pattern for each receptor type tumor over the 19-month period. Immunohistochemistry was done and in only 123 patients. Out of these, only 4 (3.25%) was triple positive with 67 (54.47%) being triple negative (See Table 5).

DISCUSSION

The ratio of breast cancer cases to total ward admissions was

Month	Total cases	Old cases (Benign and malignant)	New cases (Benign and malignant)	Breast cancer (Both old and new)	Nhis Patients	Total Males attendance	Admissions
Jan	109	80	29	24	3	9	8
Feb	137	82	55	53	7	14	5
March	116	88	23	31	8	16	6
April	108	102	46	23	3	6	6
May	91	67	24	22	3	7	8
June	156	118	38	50	10	6	13
July	83	63	20	25	7	6	3
Aug	81	60	24	21	8	5	3
Sept	132	80	52	24	10	9	10
Oct	142	94	49	42	9	9	24
Nov	99	78	21	29	4	36	5
Dec	109	63	40	25	3	4	3
Jan	167	119	48	55	10	16	16
Feb	148	115	33	37	10	7	6
March	137	92	45	37	10	26	1
April	108	73	35	42	6	6	10
May	67	44	23	33	2	6	5
June	100	70	30	44	5	9	3
July	126	81	45	41	5	9	8
Total	2271	1570	704	661	116	209	151

Table-1: Month-by-month pattern of cases at the breast clinic: January 2019 – July 2020

Month	Total cases	Old cases (Benign and malignant)	New cases (Benign and malignant)	Breast cancer	Nhis patients	Total males attendance	Admissions
2019	1421	976	445	372 (26.17%)	68	130	102
2020	853	594	259	289 (33.88%)	48	79	49
Total	2274	1570	704	661	116	209	151

Table-2: Summary of the Pattern of cases at the breast clinic: January 2019 – July 2020

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Month	Ward total cases	Total breast cancer Cases	Early breast cancer	Locally advanced Breast caner	Metastatic Breast caner
Jan	51	8	-	5	3
Feb	28	4	-	2	2
March	44	5	-	2	3
April	43	5	-	-	5
May	40	6	-	2	4
June	29	5	-	4	1
July	48	5	-	3	2
Aug	34	10	-	5	5
Sept	32	4	-	2	2
Oct	43	9	-	5	4
Nov	28	5	-	3	2
Dec	37	13	-	7	6
Jan	41	12	-	4	8
Feb	33	6	-	3	3
March	37	5	-	2	3
April	31	7	-	4	3
May	20	4	-	2	2
June	21	6	-	2	4
July	35	12	-	4	8
Total	638	129	-	56	70

Table-3: Month-by-month pattern of cases admitted to female surgical ward: Jan 2019 – July 2020

Month	Ductal CA (Cribriform)	Lobular carcinoma	Invasive ductal CA (Grade I)	Invasive ductal CA (Grade II)	Invasive ductal CA (Grade III)	Invasive ductal CA (mucinous)	Total cases
2019	2	2	42	16	5	2	69
2020	-	-	19	8	3	1	31
Total	2	2	61	24	8	3	100

Table-4: Histopathology Pattern of Breast Cancer Cases: January 2019 - July 2020

Month	Er positive Only	Er Negative Only	Pr positive only	Pr negative Only	Her2 Positive Only	Her2 Negative Only	Triple positive Only	Triple negative Only
Jan -Dec 2019	13	-	9	-	8	1	2	45
Jan – July 2020	9	-	9	-	1	2	2	22
Total	22	-	18	-	9	3	4	67

Table-5: Summary of Immunohistochemistry Pattern of Breast Cancer Cases: Jan 2019 - July 2020

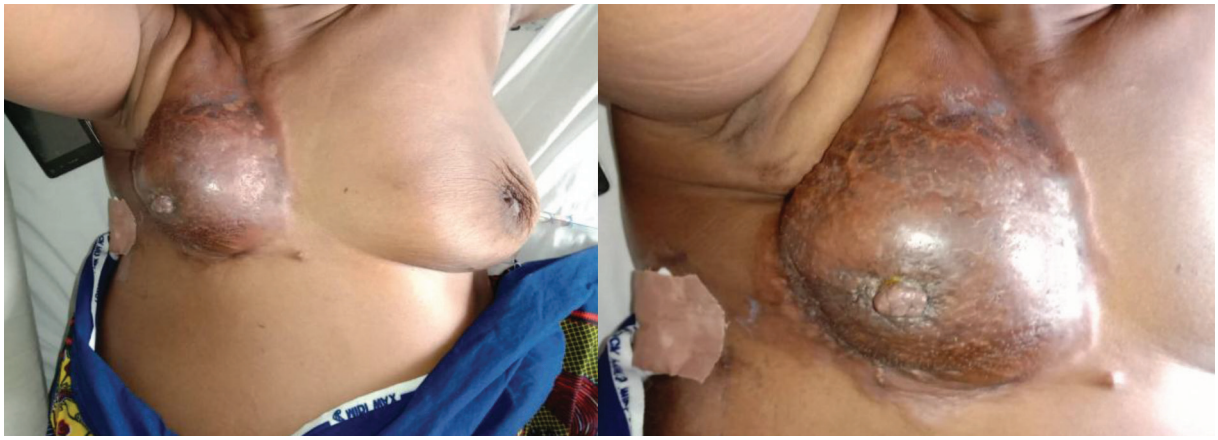

Figure-1: Clinical picture of metastatic breast cancer

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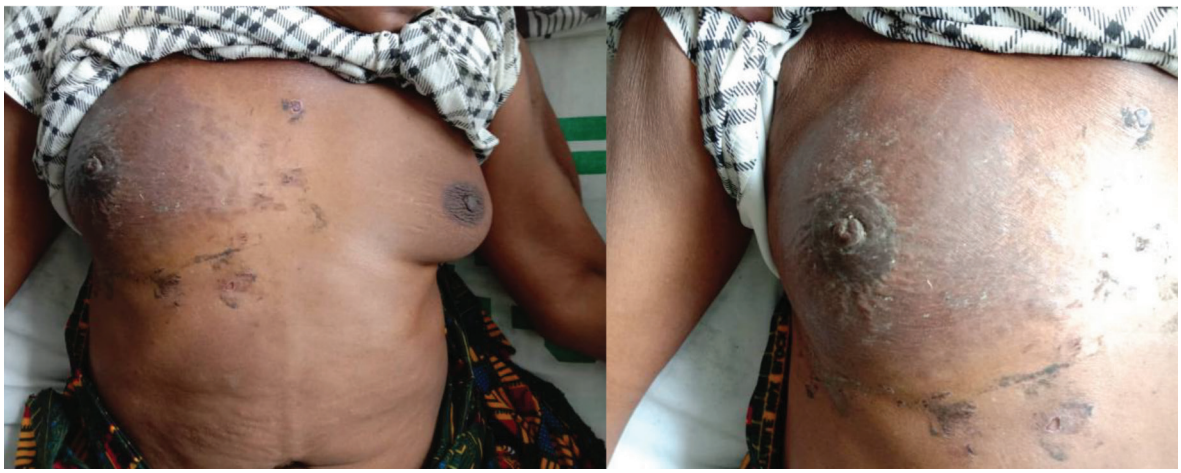

Figure-2: Locally advanced right breast cancer

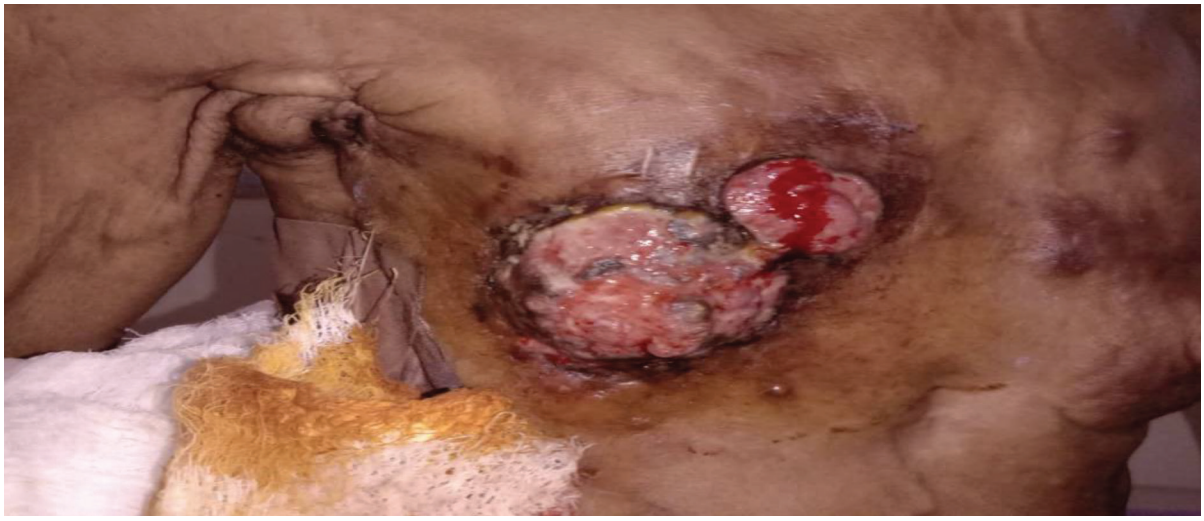

Figure-3: Ulcerated/fungating breast cancer with metastasis

1:5, implying that a fifth of the bed occupancy of the general surgery ward of the health facility was taken over by long stay locally advanced and metastatic breast cancer patients within the 19month period of study. This is similar to reports of late presentation of patients with breast cancer in other parts of Nigerian.[15-19] However, our study differs from the above in that early breast cancer cases were no longer seen presenting for treatment, until the tumour gets to advanced stages. The challenges of breast cancer care have been well documented in Africa/Developing world,[10, 20] and the Nigerian setting.[16, 21] Inability to afford treatment, preference for alternative medical care, and consequent late presentation are real issues. Cancer patients within the West African Subregion are known to patronize alternative sources of care.[19, 22, 23] Similar subject has been reported outside our shores.[24-26] with reluctance for early patronage of conventional treatment. Especially of note is that orthodox or western medicine, spiritual healing, and the African Traditional Medicine (TAC) have been identified as forms of care in the Nigerian context,[27] and patients with breast cancer are not exempted.

The total number of breast cancer patients enrolled under the national health insurance scheme is about 1/5th of the total number of patients with breast cancer. This implies that payment for breast cancer services in these patients comes from out-of-pocket expenses for diagnosis and treatment. The availability and quality of health insurance directly affect the outcome of breast cancer, implying that patients with good quality of insurance coverage fair better.[7, 28-32] Patients without a good quality health insurance are more likely to present late, and diagnosed with advanced disease. Social support and financial aids are known to improve the quality of life of breast cancer survivors.[33] These opportunities are not so readily available in most African countries with consequent negative effects on breast cancer patients despite genuine efforts by health practitioners to the contrary.[6, 34, 35]

The above issues partly explain the low admission rate of 19.51% recorded. The high rate of invasive ductal carcinomas seen among our patients is in line with other studies in Nigeria.[16, 17, 36] Also the predominance of triple negative disease is similarly observed in other parts of the country.[37-43] These two findings speak of the aggressive nature of the disease we face here. The multiple problems of advanced disease, aggressiveness, poverty, and low insurance coverage impact negatively on our ability to offer effective treatment to our patients. Mastectomy, whenever practicable is quickly offered to our patients to rid them of their huge fungating tumours. This improves the quality of life of our patients and reduces the burden of bed occupancy and daily dressing, and

also lessen the rate of abandonment by relatives.

CONCLUSION

The pattern of breast cancer presentation we see in our center for treatment is that of advanced cases and invasive ductal carcinoma with triple negativity are the most common histopathologic and immunohistochemistry pattern. Most of our patients have no health insurance coverage and are unable to cope with the cost of care. Establishment of regional cancer centers with subsidized care or total health insurance coverage for breast cancer patients will go a long way to reducing the morbidity and mortality among these patients.

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