ORIGINAL ARTICLE

ISSN: 3007-4487

SIERRA LEONE JOURNAL OF MEDICINE

The Official Journal of University of Sierra Leone Teaching Hospitals Complex

Journal Homepage: www.sljm.org

Characteristics of Breast Cancer Patients Who Refused Conventional Treatment in a Teaching Hospital in Southwestern Nigeria

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ARTICLE INFO

Article History

Received: August 17, 2024

Accepted: October 18, 2024

Published: November 9, 2024

Corresponding Author:
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Technical Information

How to Cite: J. G. Olaogun. Characteristics of Breast Cancer Patients Who Refuse Conventional Treatment in a Teaching Hospital in Southwestern Nigeria: SLJM 2024;Vol 1(2) pp 129-133. https://doi.org/10.69524/sljm.v1i2.127

Editor-in-Chief: Prof. Kehinde S. Oluwadiya, University of Sierra Leone Teaching Hospitals Complex, Freetown, Sierra Leone.

Funding: No funding was received for this study.

Ethical Consideration

Conflict of interest: The authors declare they have no conflicts of interest that are directly or indirectly related to the research.

ABSTRACT

Background: Patients' adherence to treatment recommendations is in the form of a spectrum: complete adherence or total rejection of the offered standard treatments. The aim of this study was to describe the characteristics of breast cancer patients who refused standard treatments in order to engender a focused intervention.

Methods: This was a retrospective study of breast cancer patients from 2017-2022. Data generated were analyzed using SPSS version 23.0. The results were presented using descriptive statistics. Inferential statistics for subgroup analysis was by chi-square test or risk difference with confidence intervals

Results: Among 343 patients, 86 (25% (95% CI 21-30) did not initiate conventional oncologic treatment. All were females and their age range was 33–83 years (mean, 49.9±12.0 years). The majority of the women were married (73%), educated (79%), low-income earners (69%), rural dwellers (63%) with advanced disease (81%). None of the patients had government insurance. The mean duration of symptoms was 11.9±9.7 months. Among 71patients with vital information, 50 (70% (95%CI 58-71) were confirmed dead in the last 3 years. The probability of death within 3 years was 38% (95%CI 8.0-68%) and was higher among those diagnosed as late-stage disease.

Conclusions: A large number of patients still fail to accept conventional treatments after breast cancer diagnosis. Understanding the patients' characteristics may be necessary to recognize situations where active education and support can help patients accept standard treatment thereby prolonging survival.

Key words: Breast Cancer, Patient Characteristics, Treatment Refusal

1. INTRODUCTION

The incidence of breast cancer in Africa is still relatively low compared to high-income countries (HICs) but mortality from the disease is higher in Africa than in HICs where disease incidence is highest[1]. The major contributory factor to the abysmal outcome is delayed presentation resulting in advanced stage of the disease[2,3]. Notwithstanding the stages of breast cancer, treatments are warranted whether for curative or palliative intent to improve the survival outcome and/or improve patients' quality of life.

Patients' adherence to treatment recommendations is in the form of a spectrum: on one side of the spectrum is complete adherence while on the other side is total rejection of the offered standard treatments. The number of patients that refuse standard cancer treatments is not well-known but appears large enough to warrant close attention[4]. Studies have shown that patients who declined primary standard treatment had significantly worse survival when compared to those who received treatments[5,7].

In a study by Verkooijen et al., 0.7% of the breast cancer patients registered at the Geneva cancer registry declined any of the standard treatments offered[5]. In a more recent study by Joseph et al., a treatment refusal rate of 1.2% was recorded among their patients[6]. At present, the rate of treatment

refusal of cancer treatment is unknown in our setting as studies in this area are very scarce to the best of our knowledge. The aim of this study was to describe the characteristics of breast cancer patients who refused standard treatments in order to engender a focused intervention. The patients who "did not accept cancer treatment" after diagnosis would be referred to as those who "refused" treatment and the terms would be used interchangeably in this study.

2. METHODOLOGY

This was a retrospective study of patients who presented at Ekiti State University Teaching Hospital, Ado Ekiti between January 1, 2017 and December 31, 2022. Records of all patients who had histological diagnosis of breast cancer and did not initiate conventional oncologic treatments which include mastectomy, chemotherapy or radiotherapy were included in the study. Patients with suspected breast cancer with no histological confirmation and those who initiated treatments but later absconded were all excluded. The benign breast lesions were also excluded.

We reviewed General Surgery unit register, breast oncology clinic and emergency department registers to extract a list of patients with breast cancer managed during the period. The list obtained was used to retrieve patients´ case files from the medical records department. Data were collected from the case files using a well-designed proforma which included information on socio-demographics, place of residence, clinical symptoms at presentation, lump size, laterality, stage of disease and diagnostic methods (histology and imaging modalities). Information on whether patient registered under National Health Insurance Scheme was also sought. The phone numbers of patients and the relatives obtained from their files were used to make contact and seek reasons for their abandoning hospital care and to enquire about possible outcomes.

Data were analyzed using IBM SPSS Version 25. Descriptive statistics was summarized using mean, median, interquartile range and percentages with confidence interval and results were presented with chart and tables. Inferential statistics for subgroup analysis was by chi-square test or risk difference with confidence intervals.

Data Availability Statement

The data supporting the findings of this study are available on OSF at https://osf.io/dgey4

3. RESULTS

A total of 368 breast cancer patients were seen during the study period, out of which 343 (93.2%) patients files were retrieved.

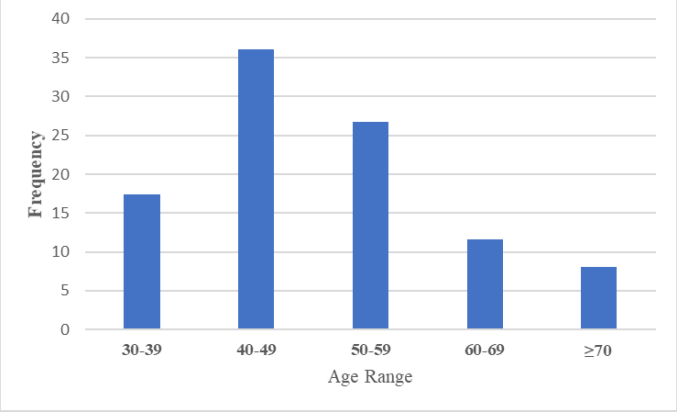

Figure 1: Age Distribution of Patients

Table 1: Demographics and Characteristics of Patients Diagnosed with Breast Cancer in EKSUTH Who Did Not Initiate Standard Treatments

Socio-Demographic	Frequency	Percentage
Gender		
Female	86	100
Religion		
Christianity	84	97.7
Islam	2	2.3
Education		
None	10	11.6
Primary	8	9.3
Secondary	36	41.9
Tertiary	32	37.2
Marital Status		
Married	63	73.3
Separated/divorced/widow	23	26.7
Menopausal Status		
Premenopausal	55	64.0
Postmenopausal	31	36.0
Place of Residence		
Rural	54	62.8
Urban	32	37.2
Occupation		
None	9	10.5
Civil servants	14	16.3
Teaching	13	15.1
Artisans	6	7.0
Trading	38	44.2
Farming	3	3.5
Others	3	3.5
Vital Status		
Alive	21	24.4
Deceased	50	58.1
Not known	15	17.4

Eighty-six (25.1%) (95% CI 21-30) patients did not have documentation of any forms of treatment after breast cancer diagnosis. All the patients were females. The age range was 33–83 years (mean, 49.9±12.0 years).

The age distribution of the patients is shown in Figure 1. The most affected age group was 40-49 years. Only 10 (11.6%) of the patients were ≥65 years.

The demographic characteristics of the patients are shown in Table 1. More than one-third of patients had education up to tertiary level. Twenty-seven (31.4%) of the absconders were government employees while the rest were majorly petty traders and artisans.

Table 2: Tumour Characteristics of the Patients Who Absconded after Breast Cancer Diagnosis

Tumour Characteristics	Frequency	Percentage
Laterality		
Right	38	44.2
Left	45	52.3
Bilateral	3	3.5
Clinical Stage		
I	3	3.5
II	13	15.1
III	54	62.8
IV	16	18.6
Histology		
Invasive Ductal Carcinoma (NOS)	82	95.4
Invasive Lobular Carcinoma	2	2.3
Others (Tubular, Medullary)	2	2.3
Scarff-Bloom-Richardson Grade		
Well Differentiated	10	11.6
Moderately Differentiated	45	52.3
Poorly Differentiated	31	36.1

None of the patents was registered under National Health Insurance Scheme. The majority (62.8%) of the women were rural dwellers.

Patients presented with breast swellings with a duration ranging from 2.0 to 60.0 months. The mean duration of symptoms was 11.9±9.7 months (median 9 months, IQR 6.0-14.0). The mean lump size was 11.1±6.6 cm (median 10.0 cm, IQR 6.0-16.0). Other tumour characteristics are shown in Table 2. The vast majority (81.4%) of patients presented with advanced breast cancer (stages III &IV).

The majority (58.1%) of the patients in this study were confirmed dead. Twenty-one (24.4%) of the patients diagnosed in the last 3 years of the study were alive while the vital status of the other patients could not be ascertained.

Among 71patients with vital information available, 50 (70% (95%CI 58-71) were confirmed dead in the last 3 years. A third of patients (33%) diagnosed at stage I, 4 out of 9 (44%) diagnosed at stage II, 29 out of 39 (74%) diagnosed at stage III and 16 patients (100%) diagnosed at state IV were confirmed dead. The probability of death within 3 years was 38% (95%CI 8.0-68%) and was higher among those diagnosed as late-stage disease compared to early disease.

4. DISCUSSION

The rate of failure to accept treatment after breast cancer diagnosis was 25% in this study and this occurred mostly in married women, educated, low-income earners, patients without insurance, rural dwellers and those with advanced disease. This rate is much higher than what have been reported in the literature[5,6]. In spite of the delayed presentation that is common to most breast cancer patients in our setting, it is worrisome that some patients could still refuse conventional cancer treatments. Most times, this subset of patients are not usually mentioned while reporting on the outcome of patients with breast cancer. With this taken into consideration, the outcome of breast cancer disease will most likely be poorer than what most studies have documented in Nigeria[2,8,9].

Successful treatment of breast cancer involves a multi-modal protocol comprising of surgery, chemotherapy, hormonal therapy, targeted/biological therapy and radiotherapy. Patients may choose to refuse some or all these treatments depending on many factors which include poor doctor-patient communication, emotional trauma of the cancer diagnosis, perceived severity of treatment side effects, and strong beliefs in holistic healing[4]. Huchcroft and Snodgrass in their study about 3 decades ago reported a rate of less than 1% refusal of all conventional treatments. Surgery and chemotherapy are still the two most common treatments in our setting. Studies have reported patients' non-adherence to these treatments and abscondment during treatment[2,11,12]. While we may think that the latter are "normal" occurrences with some of our patients, total refusal of conventional treatments is an aspect that has been neglected and this requires paying close attention.

The mean age of patients in this study was 49 years. Breast cancer affects younger population of women in African countries most of whom present in advanced stage. Since mastectomy is the mainstay of surgical treatment, patients declining surgery is not at all surprising because of concern for their body image and reproductive life. In the Carolina Breast Cancer Study, the risk of refusing therapy was higher for the younger breast cancer patients than the older ones[13]. On the contrary, some studies showed that higher proportion of older cancer patients refused treatments majorly on health grounds (Chen SJ, Radley)[7,14]. Less radical approach of surgical treatment in form of breast conserving surgery (BCS) might reduce treatment refusal. Efforts to improve early diagnosis and prompt treatments will be worthwhile in this regard to make BCS feasible.

The majority of the patients in this study were rural dwellers. Most tertiary health institutions where cancer treatments are available are not usually sited in the rural communities in Nigeria. Lack of sufficient information about severity of breast cancer and poor accessibility to treatment centres which are some of the problems faced by villagers might contribute to treatment refusal and abscondment. On the contrary, Joseph et al[6]. reported that the majority of patients who declined evidence-based treatment were urban residents.

Cancer care is very expensive worldwide. Most patients in Nigeria and other developing countries are faced with huge financial burdens as treatment is usually out-of-pocket expenditure. In this study, the majority (69%) of patients are low-income earners/ unemployed. Lack of money for conventional cancer treatment can lead to abscondment and make patients to seek for alternative care. Low income and unemployment significantly contributed to treatment delay or refusal in Taiwan[7]. In a study by Bickell et al., higher number of breast cancer patients diagnosed in early-stage and without insurance did not receive medical treatment when compared to those with insurance due to financial reasons[15]. The finding that none of the patients in this study had NHIS coverage further buttressed it. Chen et al[7]. also reported that some breast cancer patients still delay or refuse therapy even when cancer care is almost 100% accessible for them. Prospective research into the likely factors responsible for refusal of cancer treatments in our setting will be necessary in order to reduce the number of patients in this category and increase the survival rate.

Over 70% of our patients were married. Marital status can impact treatment refusal. This may be particularly so in Africa where there is male dominance. Refusal of treatment by some patients may be indirectly linked to lack of acceptance on the part of the husband. In order to improve the situation, patients' husbands must be involved in the decision-making process. In a study from Ghana, the authors also reported a greater chance of married women absconding from treatment[12].

A good number of our patients (79%) at least had secondary school education while the rest either had low education or no formal education. This is similar to high level of education reported by some authors in those who absconded/refused treatment[12,16]. However, this contrasts the finding by Suh et al. who reported low educational status as a reason for treatment refusal[17]. It is not unexpected that lack of adequate knowledge of disease or its course might hinder acceptance of cancer treatment. Further studies are warranted to determine why highly educated patients who are well informed about their ailments abscond or refuse standard treatments.

According to American Cancer Society statistics, about 7% of those in late stage (stage III or IV) did not receive any treatment in contrast to 1% in early stage[18]. Studies by other researchers have also corroborated treatment refusal in advanced cancers[19,20]. More than 80% of patients presented in advanced stage of breast cancer in this study. This has always been the trend in the previous

studies in this centre[2,21]. The sociocultural belief that cancer is incurable and often leads to death regardless of treatment measures might make some patients to delay presentation and even refuse treatment. The desire not to increase the financial burden of family members when a disease is considered incurable or terminal can also make patients to refuse standard treatment.

4.1 Conclusion

Patients who refuse standard primary treatments for breast cancer usually have poor prognosis. Without initiating treatment, the probability of dying within 3years was higher among patients with more advanced disease at diagnosis. Therefore, the generally reported gloomy outcome of breast cancer in our setting and other developing countries might be worse considering the large number of patients absconding and refusing treatments after diagnosis. The majority of those who refused treatment in this study were married women, educated, low-income earners, patients without insurance, rural dwellers and those with advanced disease. Understanding these patients' characteristics may be necessary to recognize situations where active support and counselling can help patients accept standard treatment thereby prolonging survival. Availability of professional counselling and psychological support services at treatment centers might reduce refusal rate.

Acknowledgement

The authors are grateful to the resident doctors and the staff at the oncology clinic for their assistance and cooperation during data collection for the study.

Author's Contributions

Conceptualization: JGO
Data Curation: JGO and DBI
Formal Analysis: JGO and OSA
Methodology: JGO and OSA
Resources: All authors
Supervision: JGO
Writing: JGO and OSA
Writing Review and Editing: All authors

Conflicts of Interest

The authors declare that there are no conflicts of interest

Funding

No funding was received for this study.

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