Case Report

Prevalence of Breast carcinoma in a Set of Victims Observed while receiving chemotherapy

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Abstract

Objective : to outline the characteristics of breast cancer patients who visit Yaounde General Hospital's radiation therapy unit.

Method : We carried out a descriptive retrospective analysis from 1989 to 2009 using patient medical information and the registry.

Results : 531 cases of breast cancer were registered over the study period, with 0.75 percent of those cases being male. The age range was 18–82 years old, with a 45.17 year mean. Of them, 31.9% were younger than 40 and 66.1% were under 50. In the majority of situations, self-detection accounted for 95.34% of the discovery technique. A mean of 10.35 months elapsed before a patient presents at the hospital, and 54.94% of them had taken traditional medicine prior to seeking medical attention. 62.78% of cases had locally advanced breast cancer and 08.13% had metastases at the time of diagnosis. In 88.08% of cases, a mastectomy was performed.

Conclusion : The findings supports the role that advanced stage and late presentation at diagnosis play in the profile of breast cancer in developing nations.

INTRODUCTION

With up to a million occurrences each year, breast cancer is currently the most common cancer among women globally [1]. With an incidence rate of 27.9 per 100,000 women, breast cancer is the most common cancer in Cameroon, ahead of cervical cancer, according to Globocan 2010 estimates [2]. With incidence rates rising by up to 5% yearly, breast cancer is becoming a more pressing issue in low-resource areas [3]. The frequency of breast cancer rose in Ibadan, Nigeria, from 33.6 per 100,000 in 1992 to 116 per 100,000 in 2001 [4]. From 11 cases per 100,000 in 1961 to 22 cases per 100,000 in 1995, the incidence of breast cancer in Uganda has doubled [5].

The adoption of westernised lifestyles has been linked to the rise in breast cancer incidence in African nations; however, advancements in data collection and reporting may also play a role [6, 7]. African nations tend to have a relatively advanced stage distribution for breast cancer cases, which can be partially attributed to factors such as delayed medical evaluation presentations, delayed diagnosis by inexperienced healthcare providers resulting in missed time, and limited access to medical technology for cancer screening, diagnosis, and treatment [6, 8, 9]. The issue of delayed presentation is multifaceted and differs depending on the location. They include things like religious conviction, protracted denial, ignorance, false beliefs about breast cancer, and easily accessible herbal and spiritual therapeutic choices [10–12].

The purpose of this study was to characterise the breast cancer profile of patients who were monitored at the Yaounde General Hospital's radiation therapy unit in Central Africa.

Patients and Methods

Drawing from the Yaounde General Hospital's Radiation Therapy Unit registry and patient medical records, we conducted a 20-year descriptive retrospective analysis from March 1989 to March 2009. Since Yaounde is located in the middle of Cameroon, patients from all other regions of the country are seen in the radiation therapy facility of Yaounde General Hospital. Located in Central Africa, Cameroon is a nation with few resources.The population of Cameroon was predicted to be 19.7 million in 2010; the country's birth rate was 1.03 male to female. Less than 14% of the population is under 14 years old, 56.2% is between 15 and 64 years old, and 3.3% is 65 years of age and older. For women, the life expectancy is 55.28 years, while for

men it is 53.52 years [13].

Breast cancer patients were chosen from the list of all patients who visited the radiation therapy unit, and we recorded the patient's age and gender as well as the references from the medical record for each instance of breast cancer. After that, their files were taken out of the archives department. 344 of the 531 patient cases with breast cancer that were chosen from the register had complete medical files; the remaining 187 instances (or 35%) had incomplete, unusable, or missing medical records. We recorded information on epidemiological, diagnostic, therapeutic, and histological data in the completed files. SPSS version 10 was the software used for all data analysis. We used percentage, mean, and frequency to characterise the variables.

Results

In the Radiation Therapy Unit register, 531 breast cancer patients were registered between March 1989 and March 2009 (20 years). Of these patients, 344 had properly filled files, and 187 (35%) had incomplete, unusable, or missing files.

Epidemiological Findings

Out of the 531 patients diagnosed with breast cancer, 527 were female and 4 (0.75%) were male. Patients with breast cancer who visited radiation therapy units on a yearly basis varied from 3 to 73. We observed that the annual frequency of patients with breast cancer has been steadily rising since 2002 (Figure 1).

The patients were between the ages of 18 and 82, with a mean age of 45.17 ± 12.2 years. The age range that peaked was 40–49. Nevertheless, of those with breast cancer, (351) 66.1% were under 50, and (169) 31.9% were under 40 (Figure 2). Six instances (1.12%) involved bilateral breast cancer. The age range for menarche and menopause, in relation to gynecologic and reproductive risk factors, was 9.–19 years, with a mean age of 13.53 ± 4.09 years and 39–57 years, respectively, with a mean age of 50.54 ± 4.16 years. 43.16% of the patients were menopausal at the time of their initial medical evaluation. With a mean parity of 4.64 ± 2.6, the parity ranged from 0 to 14. Of the patients, 38 (11.04%) were nulliparous, 138 (40.11%) were para 1 to 3, and 168 (48.83%) were greater than para 3. The mean age at the first term pregnancy was 20.25 ± 2.85 years, with a range of 16 to 52 years. 86.16% of patients breastfed for an average of 13.8 ± 5.4 months, with a duration ranging from 3 to 30 months. Before being diagnosed with breast cancer, just 22 patients (06.39%) had ever used hormonal therapy, such as hormonal replacement therapy for menopause or contraceptive pills.

Sixty-two cases (18.02%) had a prior history of breast disease, consisting of three breast carcinomas, three breast abscesses, and fifty-five benign lumps. Thirty (8.7%) cases of breast cancer, two (0.58%) cases of ovarian cancer, four (1.16%) cases of bowel cancer, and thirteen (03.77%) cases of other cancers had a family history of the disease.

Disease Presentation

Table 1 lists the presenting concerns made by patients with breast cancer at their initial medical evaluation. All patients had a breast mass, and at the time of the initial medical evaluation, 116 (33.72%) patients reported having breast pain. Table 2 shows the manner in which breast cancer was discovered. In 328 (95.34%) instances, breast cancer was found mostly by self-detection; in 8 (2.32%) cases, clinical breast examination; and in 2 (0.58%) cases, mammography screening. With a mean of 10.35 months, the symptoms' duration prior to hospital presentation ranged from 7 days to 52 months. Of the patients that exhibited symptoms, only 48 (13.95%) did so within a month, 106 (30.81%) did so within six months, and 247 (71.80%) did so within a year. The use of conventional medicine was utilised by 189 (54.94%) breast cancer patients prior to their initial medical assessment.

However, 296 (86.04%) patients had clinically positive lymph nodes, 28 (08.13%) had metastatic breast cancer at diagnosis, and 216 (62.78%) patients had locally advanced breast cancer (T3 and T4) (Table 3, Figures 3 and 4). Table 4 displays the histological forms of breast cancer. Invasive ductal carcinoma accounted for 236 cases (68,60%) of histological diagnoses, with invasive lobular carcinoma 38 cases (11,05%) and invasive medullary carcinoma 18 cases (5.23%) following closely behind.

Treatment Offered

A total of 383 patients (88.08%) underwent either a simple or radical mastectomy, 37 patients (10.75%) underwent breast conserving therapy (tumorectomy or quadrantectomy), and 4 patients (01.16%) with primary breast lymphoma received no surgical intervention. 198 (57.55%) of the cases involved chemotherapy as a neoadjuvant, 94 (27.32%) as an adjuvant, and 28 (08.13%) as a palliative. The medication combination used in our environment for neoadjuvant or adjuvant chemotherapy was CAF (500 mg/m2 of cyclophosphamide, 50 mg/m2 of adriamycin, and 500 mg/m2 of 5-fluorouracil) every 21 days for six cycles.

We consistently recommended hormone therapy, particularly tamoxifen, to all patients (except the four lymphoma cases), as testing for hormonal receptors in breast tumours was not feasible in our environment. Hormonal treatment was successfully used by 286 (83.13%) individuals. After surgery, radiation therapy was administered to 341 patients (98.80%), and 4 instances (1.2%) with primary breast lymphoma received neoadjuvant chemotherapy before radiation therapy. A cobalt unit was used to give radiation therapy. When necessary, patients who had undergone mastectomy were given a dose of 50 Gy spread over five weeks. On the other hand, a dose of 50 Gy administered over 5 weeks together with a boost dose of 15 Gy to the tumour site was used in cases of breast preserving treatment. After treatment, the majority of breast cancer patients who were monitored at the radiation therapy unit went back to their home regions for the posttherapeutic follow-up. This makes estimating the death rate associated with breast cancer in this survey challenging.

Discussion

Researchers are concerned about the study's weakness, which is that 33% of medical files were either missing, incomplete, or unusable. Medical statistics and research in developing nations are severely hampered by the issue of medical records, which is a serious concern. In high-resource areas, breast cancer is a pressing public health concern; in low-resource areas, where incidence rates have increased to 5% annually, it is also becoming a pressing issue [3]. There aren't many studies on time trends in Africa, although there are some that show rises in incidence, like in Ibadan, Nigeria, and Kampala, Uganda, between 1960 and late 1990s [4, 5, 7].

The increasing incidence of breast cancer in our population and/or the effects of recent public health campaigns for breast health awareness, earlier diagnosis by breast self-examinations, and the early hospital presentation in case of any signs of breast lesions could likely account for the steady increase in the annual frequency of breast cancer patients attending the radiation therapy unit since 2002 in our study.

Contrary to research conducted in underdeveloped nations, breast cancer is primarily diagnosed in older women in affluent nations [3, 10]. The mean age at diagnosis was 45.17 ± 12.2 years, and 66.1% of the patients in this study were under 50. These findings are comparable to those of other African nations where premenopausal women make up the bulk of breast can-

cer patients. On the other hand, postmenopausal women are becoming more common in North America and Europe [10, 14]. It has been suggested that demographic considerations, particularly population age and total life expectancy, account for the lower incidence rates of postmenopausal breast cancer seen in Africans [15]. Similar to other African nations, the population of Cameroon is younger, with 40.5% of the population being under 14 years old and a woman's expected life expectancy at birth being 55.28 years [13].

African populations' gynecologic and reproductive patterns typically lead to fewer ovulatory cycles over the course of a lifetime, which lowers the risk of breast cancer. The patterns that have been identified include late menarche, multiparity, early childbearing beginning, and prolonged nursing, despite the fact that published studies have largely been small [14]. The study's conclusions support African reproductive and gynecologic practices. The stage distribution of breast tumours in African nations is generally more advanced [3]. In this study, 86.04% of patients had clinically positive lymph nodes, 08.13% had metastatic breast cancer at diagnosis, and 62.78% of patients had locally advanced breast cancer (T3 and T4). According to other retrospective studies conducted in Zimbabwe and Nigeria, 70–90% of African women are diagnosed with Stage III or IV illness [15, 16]. The delayed presentation to the hospital and the lack of a nationwide breast cancer screening programme should account for the advanced stage of breast cancer upon diagnosis. Similar to other developing nations, Cameroon lacks a national programme for screening for breast cancer. Nevertheless, the public health ministry organises regular mass campaigns to raise awareness of breast health issues and conduct clinical breast exams. The study's findings support Cameroon's inadequate screening programme, since 95.34% of cases of breast cancer were discovered by the patient by self-detection, with just a small percentage being discovered by mammography (0.58%) or breast clinical examination (2.38%). In underdeveloped nations, it is not uncommon for patients to arrive at the hospital late. This is clearly shown in this study as well as numerous other studies conducted in poor nations on breast cancer [9, 10, 12, 16].

The study found that there was a mean delay of 10.35 months between the first indications of breast cancer and the first medical evaluation, ranging from 7 days to 52 months. Prior to their initial medical assessment in this research, over 50% of the

patients had sought treatment from traditional medicine practitioners. The high percentage of breast cancer patients who initially sought treatment from traditional medicine may help to explain why the patient's late arrival at the hospital. In our context, the initial motivations for turning to traditional medicine (herbal remedies and spiritual homes) included ignorance, cultural preconceptions, fear of mastectomy as a hospital treatment option, and lack of funds to pay for medical care in the absence of insurance. Due to the increased use of mammography screening in developed countries, where it accounts for over 10% of cases, there was not a single case of carcinoma in situ in this study. Over 68.60% of breast cancer cases had infiltrating ductal carcinoma, which is consistent with findings from other African research [7].

Breast cancer treatment is a diverse field. For patients with early-stage malignancies, a variety of breast-conserving procedures, such as lumpectomy, segmentectomy, and quadrantectomy, may be sufficient in place of a mastectomy. When treating locally advanced breast cancer, the typical protocol is for neoadjuvant chemotherapy in the beginning, followed by radiation therapy and a modified radical mastectomy [17]. Because of the advanced stage of the cancer at diagnosis, which precluded breast conserving therapy, and the inexperience of certain surgeons with the breast conserving method, the majority of surgeries performed in our study involved mastectomies.

One of the mainstays of treatment for breast cancer is chemotherapy. Chemotherapy was mostly used as a neoadjuvant (55.61%) in this analysis, which was consistent with the larger percentage of locally advanced breast cancer cases at presentation. This study was conducted in the Radiation Therapy Unit, where all patients received radiation therapy, primarily adjuvant, to help control locoregional illnesses. The advantages of endocrine therapy are significant enough that a breast cancer should be treated as receptor positive even in the absence of hormone receptor determination (unknown receptor status) [17]. In this study, tamoxifen was recommended to all patients (except from those with lymphoma) in the absence of hormone receptor status, and 84.11% of them took it. Of the patients, fifteen point eighty nine percent were unable to take tamoxifen. Although anastrozole, letrozole, and exemestane—inactivators or aromatase inhibitors—have shown to be more effective than tamoxifen, their cost and lack of accessibility prevent patients in impoverished nations from taking advantage of their benefits.

Conclusion

Similar to other underdeveloped nations, Cameroon has an advanced stage at diagnosis and a late presentation of breast cancer. The primary causes should be the lack of screening programmes and initial aim to turn to more easily accessible traditional medicine. However, in these settings where mammographic screening programmes seem impractical, breast health awareness, training health providers in clinical breast examination, and training women in breast self-examination should be helpful in improving early diagnosis and offering the possibility of breast conservation. Additionally, as most developing nations lack access to adequate, reasonably priced diagnostic testing and treatment, the Public Health Ministry should guarantee that these services are available.

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