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Research Article

Management of Male Breast Cancer in Togo: A Retrospective Study from the National Referral Oncology Unit

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Abstract

Background: Male breast cancer (MBC) is a rare cancer. This study aimed to analyze the clinical, pathological, and treatment features of MBC cases managed in an oncological setting in Togo. *Methods*: A descriptive retrospective study was conducted on all histologically confirmed MBC cases diagnosed between March 2016 and March 2024 at the Oncology Unit of Sylvanus Olympio University Teaching Hospital in Lomé, Togo. Epidemiological, clinical, histological, and therapeutic data were collected from medical records and analyzed using SPSS version 27. *Results*: Fifteen cases of MBC were identified among 653 confirmed breast cancer cases, representing a frequency of 2.3%. The mean age at diagnosis was 61 ±15.75 years (range, 36-95 years). Most patients (33%) were aged 60-69 years. The average delay in seeking consultation was 36 months (range: 12-48 months). The most common presenting symptom was a retroareolar breast mass (n = 12; 80%). Invasive carcinoma of no special type was the predominant histological subtype (n = 12; 80%). Immunohistochemistry was performed on seven patients: three had luminal subtypes, while four had triple-negative tumors. Tumors were classified as T2 in 40%, T3 in 13.3%, and T4 in 46.7% of cases. Five patients (33.3%) initially presented with metastasis. Surgery was performed on eight patients. Chemotherapy was given to six patients. Radiotherapy was administered to one patient. Endocrine therapy was prescribed to three patients. Of the 15 patients in this study, two were lost to follow-up before treatment. Among the remaining 13 treated patients, at last follow-up, five were alive, two had no evidence of disease, and three showed evidence of disease. Additionally, three patients were lost to follow-up, and five patients had died. *Conclusion*: Male breast cancer remains a rare and often overlooked disease in our context, frequently diagnosed at an advanced stage. Improving early detection strategies and increasing public awareness are crucial for achieving better outcomes.

Keywords

Male Breast Cancer, Histology, Epidemiology, Togo

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1. Introduction

Male breast cancer (MBC) is a rare disease, accounting for about 1% of all breast cancers and less than 1% of all cancers in men [1], but its incidence has increased in recent decades [2]. In Africa, different rates of MBC have been reported in both North Africa [3, 4] and sub-Saharan African countries [5].

Known risk factors for MBC include genetic predispositions such as BRCA1 and BRCA2 mutations, a family history of breast cancer, and Klinefelter's syndrome, along with chronic liver and testicular diseases. Lifestyle factors like obesity, alcohol consumption, and ethnicity have also been associated [6, 7].

Although diagnostic and therapeutic strategies for MBC are mainly extrapolated from female breast cancer management, MBC remains underdiagnosed [6].

Several clinical series of male breast cancer in Africa have shown that many male patients present with advanced stages, leading to a poor prognosis [5].

Togo is a low-income, French-speaking country in West Africa, with an estimated population of 8.8 million as of 2023. The country's gross domestic product (GDP) was approximately USD 8.6 billion, and the gross national income per capita reached around USD 880. The CFA franc (XOF) serves as Togo's currency, with an exchange rate of approximately 600 XOF to the US dollar. In 2021, the life expectancy at birth was 62.3 years, and the working-age population (ages 15-64) comprised nearly 55% of the total population. Urban residents constituted 43.5% of the population, while the national poverty rate remained high at 45.5%. The minimum monthly wage is roughly USD 33 [8].

The Global Cancer Observatory (GLOBOCAN) reports that over 5,000 new cases of cancer were diagnosed in Togo in 2022, with 3,600 deaths. Breast cancer is the most common cancer in both incidence and mortality in the country, with nearly one thousand new cases diagnosed [9]. However, little is known about male breast cancer in the country, with existing studies focusing mainly on imaging and histological aspects [10, 11].

This study, therefore, aimed to describe the epidemiological, clinical, histopathological, and treatment features of male breast cancer in oncological practice in Togo.

2. Methods

This was a retrospective, descriptive study conducted at the Oncology Unit of Sylvanus Olympio University Teaching Hospital in Lomé. The study included all male patients diagnosed with histologically confirmed breast cancer between March 1, 2016, and March 1, 2024. Inclusion criteria were male patients with histological confirmation of breast cancer and complete medical records available for review. We excluded cases lacking histological confirmation.

2.1. Data Collection

Data were collected from patient medical records, including demographics, clinical presentation, family history of breast cancer, risk factors, tumor laterality and location, histological subtype, stage at diagnosis, treatment options, and clinical outcomes.

Tumors were staged according to the 2018 TNM classification by the American Joint Committee on Cancer (AJCC). Histological tumor grading was performed using the Nottingham grading system. Immunohistochemical analysis was performed to evaluate estrogen receptor (ER), progesterone receptor (PR), and Human Epidermal Growth Factor Receptor 2 (HER2).

We classified the molecular subtypes as follows: luminal A (ER and/or PR positive, HER-2 negative, and Ki-67 < 20%) and luminal B (ER and/or PR positive, HER-2 negative, and Ki-67 > 20%).

HER-2 positive (ER and PR negative, HER-2 positive) and basal-like or triple negative (ER, PgR, and HER-2 negative).

Patients were followed up to the end of August 2025.

2.2. Data Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software, version 27.0.1.0. Descriptive statistics were presented as frequencies and means ± Standard Deviation (SD).

2.3. Ethical Considerations

The research was conducted in accordance with the principles outlined in the Declaration of Helsinki. The hospital's ethics committees approved the study. Written consent was not obtained from the patients because the study was designed retrospectively and did not require consent.

3. Results

3.1. Patient Characteristics

Fifteen cases of MBC were identified among 653 confirmed breast cancer cases, resulting in a frequency of 2.3%. The average age at diagnosis was 61 ± 15.75 years (range: 36-95 years), with the 60-69 age group being the most affected at 33%.

Most patients were retirees (40%) and married (86.6%). One patient (6.7%) reported a family history of breast cancer. Three patients (20%) were smokers, and nine (60%) had a history of alcohol consumption. Obesity was present in five patients (33.3%), and eight patients (20%) were overweight. One case of gynecomastia was noted. The clinical characteristics of patients are presented in Table 1.

The average time to consultation was 36 months, with a range of 12 to 48 months. The most common clinical symp-

tom was a retroareolar mass (n = 12; 80%). Three patients (20%) presented with skin ulceration. All patients had a unilateral lesion. The right breast was affected in 9 cases (60%), while the left breast was affected in 6 cases (40%).

Most patients had invasive carcinoma of no special type (n = 12; 80%). Grade II and III tumors were most common (n=12; 80%).

Immunohistochemistry was performed in 7 cases. Both the Estrogen Receptor and Progesterone Receptor tests were positive in 3 patients, while the HER2 test was negative in all cases. Based on molecular subtype, three cases were luminal, and four were triple-negative.

According to the TNM classification, tumors were classified as T2 in 40%, T3 in 13.3%, and T4 in 46.7%. Five patients (33.3%) initially presented with metastasis. Metastasis sites included the lung, lymph nodes, bone, and liver. The pathological characteristics of patients are shown in Table 2.

Table 1. *Clinical Characteristics of patients.*

Variable	Cases (%)
Mean Age	61.06±15.75 [36-95]
Age group	
[30-39]	1 (6.7)
[40-49]	4 (26.7)
[50-59]	2 (13.3)
[60-69]	5 (33.3)
[70-79]	1 (6.7)
[80 and more]	2 (13.3)
Ocupation	
Trader	3 (20)
Driver	1 (6.7)
Farmer	2 (13.3)
Electrician	1 (6.7)
Teacher	2 (13.3)
Retired	6 (40)
Marital Status	
Single	1 (6.7)
Divorced	1 (6.7)
Married	13 (86.6)
Family history of cancer	
Negative	14 (93.3)
Positive	1 (6.7)
Tobacco consumption	
Smoker	3 (20)
No Smoker	12 (80)
Alcohol consumption	
Yes	9 (60)
No	6 (40)
Body Mass Index	
Normal weight	7 (46.7)
Overweight	3 (20)
Obesity	5 (33.3)

Table 2. *Pathological Characteristics of patients.*

Variable	Cases (%)
Laterality	
Right	9 (60)
Left	6 (40)
Histology	
Ductal carcinoma	12 (80)
Mucinous carcinoma	1 (6.7)
Micropapillary carcinoma	2 (13.3)
Tumor stage	
T2	6 (40)
T3	2 (13.3)
T4	7 (46.7)
Node stage	
N0	6 (40)
N1/N2	9 (60)
Stage	
I	2 (13.4)
II	5 (33.3)
III	3 (20)
IV	5 (33.3)
Grade	
1	3 (20)
2	8 (53.3)
3	4 (26.7)
Estrogen Receptor status (N= 7/15)	
Negative	4 (57.1)
Positive	3 (42.9)

Variable	Cases (%)
Progesterone Receptor status (N= 7/15)	
Negative	4 (57.1
Positive	3 (42.9)
HER2 status (N= 7/15)	
Negative	7 (100)
Positive	0
Molecular Subtype (N= 7/15)	
Luminal A	2 (28.6)
Luminal B	1 (14.3)
TNBC	4 (57.1)

TNBC: Triple Negative Breast Cancer

3.2. Treatment and Outcomes

Thirteen patients (86.6%) underwent oncologic treatment. Surgery was performed on eight patients; the most common procedure was a modified radical mastectomy (75%). Two patients had a simple mastectomy. Breast-conservation surgery was not performed in any of our patients.

Chemotherapy was administered to 6 patients, including one who received neoadjuvant chemotherapy, one who received adjuvant chemotherapy, and four who received palliative chemotherapy. The adjuvant treatment involved three consecutive cycles of an anthracycline, followed by three cycles of a taxane regimen. Palliative chemotherapy consisted of an anthracycline-only regimen.

Post-mastectomy radiotherapy was given to one patient. Endocrine therapy with Tamoxifen, a selective estrogen receptor modulator, was prescribed to three patients with hormone receptor-positive breast cancer at a dose of 20 mg once daily.

Of the 15 patients included in this study, two were lost to follow-up before treatment. The remaining 13 treated patients were monitored regularly. Three patients who underwent surgery developed metastatic recurrence and received palliative chemotherapy.

At the last follow-up, five patients were alive: two with no evidence of disease and three with evidence of disease. Three patients were lost to follow-up, and five had died. Patients' treatment and outcomes are summarized in Table 3.

Table 3. *Patient's treatment and outcomes.*

Cases	Stage	Initial treatment	Evolution and outcomes
M/47	Stage I	Total mastectomy without axillary dissection	alive, free of disease
M/68	Stage I	Total mastectomy without axillary dissection	alive, free of disease
M/85	Stage II	Modified radical mastectomy	dead
M/49	Stage II	Modified radical mastectomy	lost to follow up
M/57	Stage II	Modified radical mastectomy	metastatic recurrence, dead
M/63	Stage II	Modified radical mastectomy	metastatic recurrence, dead
M/73	Stage II	Modified radical mastectomy	lost to follow up
M/52	Stage III	MRM + Adjuvant Chemotherapy + Radiotherapy + endocrine therapy	metastatic recurrence, dead
M/48	Stage III	neoadjuvant chemotherapy	lost to follow up before the surgery
M/46	Stage IV	palliative chemotherapy alone	living with evidence of disease
M/66	Stage IV	palliative chemotherapy alone	dead
M/36	Stage IV	palliative chemotherapy+ endocrine therapy	living with evidence of disease
M/69	Stage IV	palliative chemotherapy +endocrine therapy	living with evidence of disease

MRM: Modified radical mastectomy

4. Discussion

The purpose of this study was to describe the clinico-pathological features, treatment options, and outcomes of male breast cancer at the Oncology Unit of Sylvanus Olympio University Teaching Hospital in Lomé.

This study confirms that male breast cancer is rare in our

setting, with only fifteen cases diagnosed at our institution over eight years, compared to 638 new cases of female breast cancer during the same period. The annual rate of 2.3 cases is lower than the 3.2 cases previously reported at the laboratory of anatomy and pathology [11]. This figure is closer to that reported in Burkina Faso [12], but higher than the 1% typically seen in Western countries [1, 2].

Male breast cancer typically occurs at an older age than in women worldwide. A study on the clinicopathological features of male breast cancer patients, based on a nationwide registry in Japan, found that the median age for male cases was over 10 years higher than for female cases [13]. Similarly, a meta-analysis of male breast cancer in Africa by Ndom et al [5] revealed that African men were diagnosed at an older age than African women in most studies. In our research, male breast cancer occurred at an average age of 61 years, which aligns with data from countries like Burkina and Uganda [12, 14].

Several risk factors have been associated with MBC [6]. In Niger, the identified risk factors included gynecomastia, breast trauma, jaundice, and obesity [15]. In our study, the main risk factors were alcohol consumption (60%) and obesity/overweight (53.3%). These factors are well known to increase risk by increasing peripheral estrogen production via aromatase in adipose tissue [16, 17]. Tobacco use, reported in 20% of patients, is not considered a significant risk factor but may have a synergistic effect with other exposures [18]. A family history was positive in one patient; however, no genetic analysis was conducted on any of our patients.

Symptoms in our series are similar to those observed in other populations, with most patients presenting with a painless, retroareolar mass [3, 4, 18, 19]. Depending on the timing and progression of the disease, other symptoms may include nipple retraction, skin ulceration, local bleeding, and palpable axillary and lymph nodes [19]. Therefore, three patients (20%) presented with skin ulceration.

The average delay of 36 months in consultation highlights a significant diagnostic delay, as previously reported in African series [3, 4, 12, 15]. This explains the high rates of advanced stages (T3-T4: 60%) and initial metastases (33%).

The late presentation is particularly concerning and likely contributes to the high number of diagnoses at an advanced stage. Due to patient ignorance and limited medical resources in many African countries, male breast cancer is often diagnosed late [5]. Indian patients also tend to present with advanced disease [20, 21]. Similar to Burkina Faso, late diagnosis in our patients can be linked to ignorance and poverty. Patients often first visit traditional healers, who are more affordable, and only seek hospital care as a last resort [12]. The stigma surrounding MBC, men's lower likelihood of undergoing regular health screenings, and limited knowledge among healthcare professionals about MBC also lead to men being diagnosed at more advanced stages [22].

Histologically, invasive ductal carcinoma was the most common subtype (80%), consistent with the literature [6]. Male breast cancer is more likely to be a hormone receptor-positive disease [2, 6]. However, a study by Gogia [20] shows a high rate of HER2 neu positivity and triple negativity in male breast cancer in Indian patients. In our study, immunohistochemistry was performed on only 7 cases. Among these, luminal tumors represented 43%, which is lower than the proportions reported in Western series (80-90%) [23, 24]. Conversely, triple-negative tumors (57%) were overrepresented compared to Western cohorts, where they are rare [23, 24]. This unfavorable molecular profile could contribute to the poor prognosis observed, although the small sample size limits interpretation.

Breast cancer in males should be treated the same way as in women. Modified radical mastectomy was the most common surgical procedure among our patients, in line with current guidelines for MBC [6]. The lack of breast-conserving surgery reflects both the large tumor size at diagnosis and local technical limitations. Chemotherapy was initially given to less than half of the patients, often in a palliative context, and endocrine therapy was only provided for luminal-positive cases. Limited access to radiotherapy and adjuvant treatments remains a significant challenge, as reported in other African settings [12, 14, 15].

The prognosis remains poor; at the last follow-up, only two patients were alive without recurrence, while five had died. These results align with African data, where the 5-year overall survival ranges from 40-60% [3, 4, 12], compared with Western rates of around 80% [25]. In our series, diagnostic delays, limited access to treatment, and a higher proportion of biologically aggressive subtypes contribute to this outlook.

Although limited by its small sample size, loss to follow-up, and incomplete access to immunohistochemistry, our study provides novel data on MBC in Togo. It underscores the urgent need to raise awareness, incorporate early diagnosis into cancer control efforts, and expand access to molecular testing and adjuvant therapies.

5. Conclusion

Male breast cancer, although rare, poses a significant clinical challenge in Togo because patients often seek care at advanced stages and have limited access to diagnostic and treatment resources. Our study highlights the predominance of invasive ductal carcinoma and delays in seeking medical attention, which lead to poor outcomes. These findings emphasize the urgent need for increased awareness, early detection strategies, and expanded access to immunohistochemistry and adjuvant therapies. Multicenter studies with larger populations are crucial to better understand the epidemiology and improve the management of male breast cancer in sub-Saharan Africa.

Abbreviations

MBC	Male Breast Cancer
BRCA1	Breast Cancer 1
BRCA2	Breast Cancer 2
GLOBOCAN	Global Cancer Observatory
TNM	Tumor Nodes Metastasis
AJCC	American Joint Committee on Cancer
ER	Estrogen receptor
PR	progesterone receptor
HER2	Human Epidermal Growth Factor Receptor 2
SPSS	Statistical Package for the Social Sciences
SD	Standard Deviation

Author Contributions

Ablavi Adani-ifè: Conceptualization, Data curation, Formal Analysis, Methodology, Writing – original draft, Writing – review & editing

Koffi Amégbor: Supervision, Validation

Mohaman Djibril: Supervision, Validation

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Conflicts of Interest

The authors declare that they have no competing interests.

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