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Breast Cancer: Epidemiological, Histological, and Therapeutic Aspects in the Department of Obstetrics and Gynecology at the National Hospital Donka, Conakry University Teaching Hospital

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Abstract

Objective: To study the epidemiological, histological, and therapeutic characteristics of breast cancer in the Department of Obstetrics and Gynecology at the National Hospital Donka, Conakry University Teaching Hospital. **Methods:** This was a retrospective descriptive study involving 72 patients with breast cancer managed between January 1, 2010, and December 31, 2022. Data were collected from medical records and focused on epidemiological, histological, and therapeutic aspects. **Results:** Breast cancer accounted for 11.9% of the 602 gynecological and breast tumors recorded, ranking second. The mean age of patients was 43.5 ± 3.5 years, and 81.6% were multiparous. A family history of breast cancer was found in 37.5% of patients. The consultation delay exceeded 4 months in 50.8% of cases. A breast mass was the main reason for consultation (49%). Nearly half of the patients (49%) were diagnosed at T3 and T4 stages. Invasive ductal carcinoma was the most frequent histological type (53.6%). Modified radical surgery combined with axillary lymph node dissection and adjuvant chemotherapy was performed in 67.3% of patients. The in-hospital mortality rate was 10.2%, and the observed overall survival at 18 months was 75.5%. **Conclusion:** Breast cancer is a common gynecological malignancy in our department, affecting relatively young women and being predominantly diagnosed at an advanced stage. Invasive ductal carcinoma predominates, and surgery remains the main treatment modality.

Keywords

Breast, Cancer, Donka

1. Introduction

Breast cancer is the most common cancer among women and the leading cause of female cancer-related mortality worldwide. According to the World Health Organization, more than 2.3 million new cases and approximately 685,000 deaths were recorded in 2020, with a progressive increase in incidence in low- and middle-income countries [1] [2].

In sub-Saharan Africa, breast cancer is characterized by late diagnosis, involvement of younger women, and proportionally higher mortality compared with high-income countries. Data from the International Agency for Research on Cancer indicate that more than 60% of cases in Africa are diagnosed at a locally advanced or metastatic stage, limiting therapeutic options and worsening prognosis [3] [4].

Furthermore, several African studies have shown that breast cancers occurring in younger women are often associated with biologically more aggressive forms, which may contribute to the severity observed at diagnosis [5].

In Guinea, hospital-based data on breast cancer remain scarce and fragmented. Most patients seek care late, often after the onset of complications, and management relies mainly on radical surgery and chemotherapy due to diagnostic and therapeutic constraints. This study aimed to describe the epidemiological, histological, and therapeutic aspects of breast cancer among patients managed in the Department of Obstetrics and Gynecology at the National Hospital Donka, Conakry University Teaching Hospital, the main referral center in the country.

2. Methods

2.1. Study Design

This was a retrospective descriptive study conducted over 12 years, from January 1, 2010, to December 31, 2022. The study aimed to analyze the clinical, histological, and therapeutic characteristics of breast cancer among patients managed in the Department of Obstetrics and Gynecology at the National Hospital Donka, Conakry University Teaching Hospital.

2.2. Study Population and Inclusion Criteria

The study population consisted of patients treated for breast cancer in the Department of Obstetrics and Gynecology during the study period.

All hospitalized patients who underwent surgical management for breast cancer and had a complete medical record, including a histopathological report confirming the diagnosis, were included.

Patients with incomplete medical records, those secondarily referred to other health facilities, and cases lost to follow-up were excluded to ensure the quality,

accuracy, and reliability of the analyzed data.

2.3. Data Collection

All medical records meeting the inclusion criteria were systematically reviewed. Data collection aimed to gather detailed information on the epidemiological, clinical, histological, and therapeutic aspects of breast cancer.

Extracted data included sociodemographic characteristics, clinical signs, tumor staging, histopathological findings, therapeutic modalities, and postoperative outcomes.

2.4. Data Analysis

Collected data were entered and analyzed using SPSS, version 21.

Qualitative variables were described using frequencies and percentages. Quantitative variables were summarized using descriptive statistics, including means, standard deviations, and extreme values when applicable.

2.5. Ethical Considerations

Prior to the initiation of the study, authorization was obtained from the head of the department. The study was conducted in accordance with ethical principles, ensuring patient anonymity and data confidentiality.

No information allowing patient identification was used during data analysis or manuscript preparation, in compliance with applicable ethical standards.

3. Results

3.1. Epidemiological Aspects

Among the 602 gynecological and breast tumors recorded during the study period, 72 cases of breast cancer were identified, corresponding to a frequency of 11.9% and representing 38% of breast lesions.

Studies show that endometrial cancer ranks third, behind cervical cancer and breast cancer (**Figure 1**). Two decreases were observed in 2015 and 2020, with a peak in 2021 (**Figure 2**). The majority of patients were diagnosed at an advanced stage of the disease, dominated by stage IV (47%), followed by stage III (27%), while early stages I and II were less represented (**Figure 3**).

The mean age of patients was 43.5 ± 3.5 years, and 81.6% were multiparous. A family history of breast cancer was found in 37.5% of patients. More than half of the patients consulted after a delay exceeding 4 months (50.8%) (**Table 1**).

A breast mass was the main reason for consultation (49%), followed by pain (27%) and nipple discharge (10%) (**Table 2**).

3.2. Histological Aspect

From a histological perspective, infiltrating ductal carcinoma was the most frequent type (53.6%), followed by infiltrating lobular carcinoma (42.7%) and other types (3.7%).

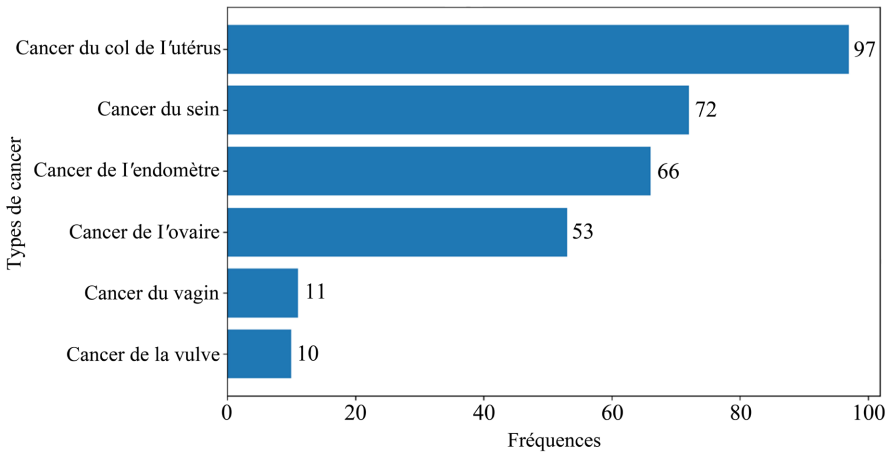

Figure 1. Distribution of gynecological and breast cancers by type.

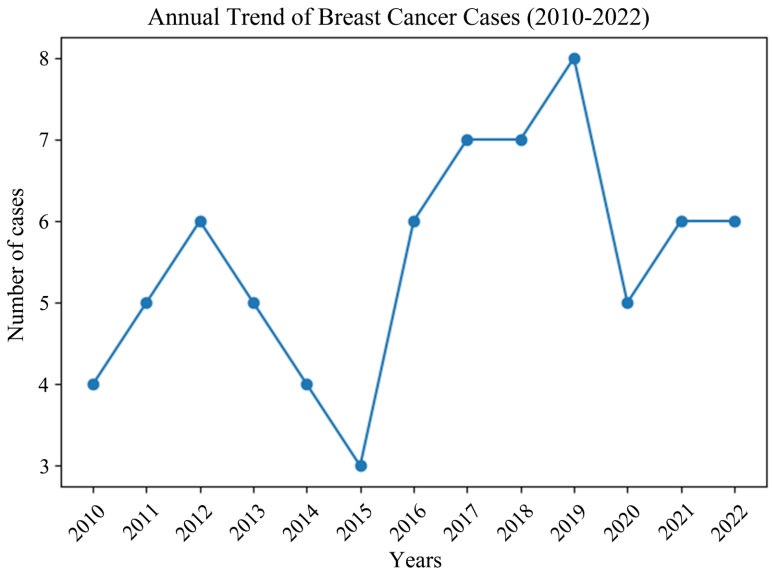

Figure 2. Distribution of breast cancer cases by year.

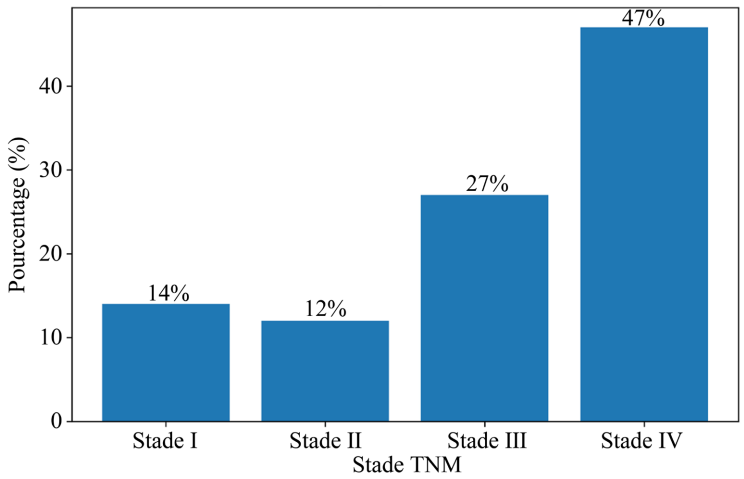

Figure 3. Stades TNM of breast cancer.

3.3. Therapeutic Aspect

Management was mainly based on modified radical surgery combined with axillary lymph node dissection and adjuvant chemotherapy (67.3%).

Postoperative outcomes were favorable in 79.6% of cases, with an in-hospital mortality rate of 10.2%. After a mean follow-up of 18 months, the observed overall survival was 75.5%.

Table 1. Distribution of breast cancer cases according to sociodemographic characteristics (N = 72).

Sociodemographic characteristics	Frequency (n)	Percentage (%)
Age (years)		
30 - 39	26	36.1
40 - 49	28	38.9
50 - 59	14	19.4
≥60	4	5.6
Mean age: 43 ± 3 years **Range:** 30 - 67 years		
Parity		
Multiparous	59	81.5
Pauciparous	6	5.5
Nulliparous	4	4.7
Primiparous	3	8.3
Educational level		
No formal education	43	59.7
Primary	18	25.0
Secondary	10	13.9
Higher education	1	1.4
Marital status		
Married	26	36.1
Widowed	34	47.2
Divorced	10	13.9
Single	2	2.8
History of cancer		
Yes	22	30.5
No	50	69.5
Obesity		
Yes	39	54.1
No	33	45.8

Table 2. Distribution of breast cancer cases according to the reason for consultation.

Reason for consultation	Number (n)	Percentage (%)
Breast mass	35	48.6
Breast pain	19	26.4
Nipple discharge	7	9.7
Other reasons	11	15.3
Total	**72**	**100.0**

4. Discussion

In our series, breast cancer accounted for 11.9% of gynecological and breast tumors managed and represented 38% of breast lesions, confirming its growing burden among female cancers in our hospital setting. Although cervical cancer remains the most frequent localization, breast cancer occupies a major place, as reported in many hospital-based series from sub-Saharan Africa [2] [3]. Comparable frequencies have been reported in several West African countries, notably Senegal and Nigeria, reflecting a similar epidemiological trend in the sub-region [6] [7].

Figure 1 illustrates the distribution of gynecological and breast cancers by type, highlighting the predominance of cervical cancer, followed by breast cancer, then endometrial and ovarian cancers. This hierarchy reflects the realities of the health system, particularly the absence of organized breast cancer screening, in contrast with more structured prevention programs for cervical cancer [4] [8] [9].

The mean age of patients with breast cancer in our study was 43 ± 3 years, with a predominance of the 30 - 39 (36.1%) and 40 - 49 (38.9%) age groups. The involvement of relatively young women is a well-documented characteristic in sub-Saharan Africa and contrasts with Western countries, where the mean age at diagnosis generally exceeds 50 - 55 years [4] [8] [9]. Studies have shown that breast cancers in young African women are more frequently associated with aggressive subtypes, which may explain the advanced stage at diagnosis and the poor prognosis [5].

The majority of patients in our series were multiparous (81.5%). While multiparity is classically described as a protective factor against breast cancer in high-income countries, this protective effect appears attenuated in African contexts, probably due to the coexistence of other risk factors such as obesity and unfavorable socio-economic conditions [10] [11].

The low level of education, observed in nearly 60% of patients, represents a major indirect determinant of delayed diagnosis. Several studies have shown that low educational attainment is associated with poor knowledge of warning signs, low practice of breast self-examination, and delayed healthcare-seeking behavior [4] [9] [10]. In addition, sociocultural and economic barriers remain major obstacles to early access to oncological care in low- and middle-income countries [12].

Regarding marital status, the high proportion of widows (47.2%) reflects potential socio-economic vulnerability. Several authors have emphasized that the lack of social and financial support constitutes a significant barrier to timely access to specialized care and contributes to delayed diagnosis of breast cancer [8] [12].

Clinically, a breast mass was the main reason for consultation, in line with African data where self-detection or incidental discovery of a mass remains the most common mode of presentation of breast cancer in the absence of organized screening [4] [10]. This late presentation explains the predominance of T3 and T4 stages observed in our series. According to the IARC, more than 60% of breast cancers in sub-Saharan Africa are diagnosed at an advanced stage, compared with less than 30% in high-income countries [3] [4].

Histologically, invasive ductal carcinoma was the most frequent histological type (53.6%), in agreement with international data [4] [13]. Therapeutic management was mainly based on modified radical surgery combined with axillary dissection and adjuvant chemotherapy, reflecting late diagnosis and limitations of the technical platform. Similar findings have been reported in several hospital centers in West and Central Africa [6] [14] [15].

The in-hospital mortality rate of 10.2% remains high but is comparable to that reported in other African series, where it ranges from 8 to 15% [14] [15]. The World Health Organization emphasizes that improving early diagnosis, strengthening screening, and ensuring access to multidisciplinary care could significantly reduce this mortality [1] [9].

Overall, breast cancer at the National Hospital of Donka is characterized by involvement of relatively young women, a low level of education, late diagnosis, and predominantly radical management. These results are consistent with African and international data and highlight the need for prevention strategies, early detection, and context-adapted management in Guinea.

5. Conclusion

Breast cancer is a frequent gynecological malignant tumor in our department, affecting relatively young women and being diagnosed mainly at an advanced stage. Invasive ductal carcinoma predominates, and surgery remains the mainstay of treatment.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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