

Breast Cancer in Young Women about 87 Cases in the General Surgery Department CHU Gabriel Touré

Maïga Amadou^{1*}, Saye Zakari¹, Sidibé Boubacar Yoro¹, Diakité Ibrahima¹, Bah Amadou², Diallo Mahamadou³, Diallo Aly Boubacar², Traoré Bathio², Moussa Diassana², Koné Tani¹, Dombia Arouna Adama¹, Traoré Amadou¹, Diallo Mamadou⁴, Traoré Djibril⁵, Konaté Moussa⁴, Saadé Oumou Hélène¹, Kanté Lassana¹, Konaté Madiassa¹, Dembélé Souleymane¹, Samaké Moussa¹, Keita Mory¹, Dembélé Bakary Tientigui¹, Traoré Alhassane¹, Togo Adégné¹

¹Department of General Surgery, University Hospital, Bamako, Mali

²Department of General Surgery, Sikasso Hospital, Sikasso, Mali

³Department of Orthopedic Traumatology, University Hospital, Bamako, Mali

⁴Reference Center of Commune VI, Bamako, Mali

⁵General Surgery Department, Mopti Hospital, Mopti, Mali

Email: *amadoumaiga3@gmail.com

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Abstract

Our objectives were to determine the frequency of breast cancer in young women, to determine the risk factors for breast cancer in young women, to detail the diagnostic process of the disease, to determine the different therapeutic strategies. This was a retrospective and descriptive study going from January 2005 to December 2021, a period of 17 years. The study involved 87 women with an average age of 33.2 years. Patients consulted 66 times or 75.9% for breast mass. The size of the tumor was greater than or equal to 5 cm in 62 patients; it was localized in the supero external quadrant 41 times or 47.1%. Molecular classification revealed the following results: Luminal A 21.4%; receptive (HER2) positive 28.6%, and triple negative 42.9%. Stage II was the most represented with 47.4%. Histology found infiltrating carcinoma of non-specific type in 76 patients. The treatment was mastectomy axillary dissection in 66 patients, quadrantectomy + axillary dissection in 6 cases (6.9%) associated with radiotherapy in 6 patients, chemotherapy was performed in 79 of our patients and hormone therapy in 10 patients. **Conclusion:** Breast cancer is frequent in our country. Patients generally consult us at a late stage. The possibility of determining certain receptors and carrying out certain non-surgical treatments on site would improve the prognosis.

Keywords

Breast Cancer, Young Woman, Receptors, Diagnosis, Prognosis, Mali

1. Introduction

Breast cancer is a malignant neof ormation that develops at the expense of the various constituents of the mammary gland [1]. Breast cancer accounts for 11.6% of cancer incidence. An estimated 2.1 million women are diagnosed with breast cancer. It is the most common in 154 of the 185 countries covered by GLOBOCAN 2018 and is the 5th leading cause of cancer death in women with 15% of deaths due to the disease [2].

For a long time, breast cancer was linked to a more or less advanced age. However, in recent literature, breast cancer is increasingly diagnosed in young people, its frequency is estimated at 7% of all cases of breast cancer. Thus, several studies have highlighted a number of factors involved in the etiology of this cancer. Among the main factors studied to date are endogenous and exogenous hormonal factors, factors related to reproduction, genetic and health factors, and finally factors related to lifestyle and nutrition [3].

The age threshold that should be considered as “young age” associated with a higher frequency of the above characteristics is not very clear in the literature, varying from 35 to 40 or even 45 years. In this manuscript, we have chosen the age of 40 as the threshold [4].

In France, breast cancer is the most common cancer in women with a constantly increasing incidence for 20 years, the number of new cases estimated in 2015 is 54,062 and occurs in 22% of women under 40 years old. In 7 years, 2083 patients with invasive breast cancer have been treated in the Gynecology department of the University Hospital of Tours in France. Among these women, 7.4% were less than or equal to 40 years old (7.4%) [5].

Miss JABA Sihan had a 40% incidence of breast cancer in women under 40 in Rabat, Morocco [6].

In Mali in 2017 Zeinabou Coulibaly found 19.68% of breast cancer in women under 40 [7].

As with other breast cancers, the diagnosis of breast cancer in young women is based on a careful clinical examination, mammography, breast ultrasound, and especially a histological examination of the tumor.

The management is consensual and is designed in a multidisciplinary consultation meeting which makes it possible to validate the therapeutic options.

Only early detection improves the prognosis of this cancer. This requires self-examination but also regular episodes of mammography [8].

Detection of metastatic disease at the subclinical stage does not improve survival. But early detection of local recurrences has a beneficial impact on survival [9].

In Mali, few studies have been carried out on breast cancer in young women, which motivated us to initiate this work.

2. Objective

To determine the frequency of breast cancer in young women; to describe the risk factors for breast cancer in young women; to develop the diagnostic approach of the disease; to identify the different therapeutic strategies.

3. Methodology

This was a retrospective and descriptive study going from January 2005 to December 2021, a period of 17 years, and included all cases of breast cancer in women aged 40 and under, operated and with a histological diagnosis. Data confidentiality was respected. The names of the patients do not appear in any document relating to the results of this study.

4. Results

During our study we found 265 patients operated on for breast cancer, 87 of whom were aged 40 and under, at 32.83% of cases.

The age group [36 - 40 years] was the most frequent at 46%. The average age was 33.21 years with a standard deviation of 6.9 and extremes of 15 and 40 years (**Table 1**).

The family history of breast cancer was found in 09 cases at 10.3% (**Table 2**).

The menarche was late (greater than or equal to 16 years) in 9 of our patients (**Table 3**).

The majority of our patients had 4 as parity in 20.7% of cases followed by 03 and 5 which represented respectively 17.2% and 16.1% of cases (**Table 4**).

75.9% of our patients had consulted for a breast mass (**Table 5**).

There was breast pain in 57.5% of cases (**Table 6**).

There was skin ulceration in 33.3% of cases (**Table 7**).

The masses were localized in 47.1% of cases in the supero-external quadrant followed by the supero-internal quadrant in 11.5% of cases (**Table 8**).

The mean height was 07.6 cm with extremes of 1 and 27 cm and a standard deviation of 6.01 (**Table 9**).

ACR3 was the most represented, 26.4% of cases (**Table 10**).

Breast ultrasound was not performed in 34.5% of patients. Ella was contributory in 65.5% (**Table 11**).

Infiltrating carcinoma of the non-specific type was the most represented in 87.3% of cases, followed by breast carcinoma which is at 5.7% (**Table 12**).

SBR-EE grade 2 was the most represented in 50.6% of cases (**Table 13**).

The triple negative was the most represented at 42.9% (**Table 14**).

60% des métastases étaient osseuse suivit du foie et des poumons qui représentait chacun 20% des cas (**Table 15**).

Stage 2 was the most represented with 47.2% of cases followed by stage 3 which represented 37.9% of cases (**Table 16**).

Table 1. Distribution of patients according to age (in years).

Age	Effective	Percentage
Less than or equal to 15	1	1.1
16 à 20	5	5.7
21 à 25	8	9.2
26 à 30	11	12.6
31 à 35	22	25.3
36 à 40	40	46
Total	87	100

Table 2. Distribution of patients according to family history of breast cancer.

History of breast cancer	Effective	Percentage
breast cancer	10	11.5
No	77	88.5
Total	87	100

Table 3. Distribution of patients according to age of onset of menarche.

menarche	Effective	Percentage
11	1	1.2
12	8	9.2
13	21	24.1
14	33	37.9
15	15	17.2
16	6	6.9
17	2	2.3
18	1	1.2
Total	87	100

Table 4. Distribution of patients according to parity.

parity	Effective	Percentage
0	7	8
1	11	12.6
2	9	10.3
3	15	17.2
4	18	20.7
5	14	16.1
6	6	6.9
7	4	4.6
8	2	2.4
10	1	1.2
Total	87	100

Table 5. Distribution of patients according to the reason for consultation.

Reason for consultation	Effective	Percentage
breast mass	66	75.9
breast pain	11	12.6
Nipple discharge	4	4.6
Breast wound	4	4.6
Breast pruritus	1	1.2
Breast ulceration	1	1.2
Total	87	100

Table 6. Distribution of patients according to the existence of breast pain.

Breast pain	Frequency	Percentage
No	37	42.5
yes	50	57.5
Total	87	100

Table 7. Distribution of patients according to the existence of skin ulceration.

Skin ulceration	Effective	Percentage
No	58	66.7
Yes	29	33.3
Total	87	100

Table 8. Distribution of patients according to tumor location.

Tumor location	Effective	Percentage
Supero-outer quadrant	41	47.1
Supero-inner quadrant	10	11.5
Infero-outer quadrant	4	4.6
Inner lower quadrant	5	5.8
Outer and inner supero quadrant	7	8
Outer and inner lower quadrant	4	4.6
Retro areolar	7	8
whole breast	9	10.3
Total	87	100

Table 9. Distribution of patients according to tumor size.

Tumor size (cm)	Effective	Percentage
Less than or equal to 2	2	2.3
2 à 5	23	26.4
greater than or equal to 5	62	71.3
Total	87	100

Table 10. Distribution of patients according to the result of the mammography.

Mammography	Effective	Percentage
ACR1	1	1.2
ACR2	21	24.1
ACR3	23	26.4
ACR4	17	19.5
ACR5	3	3.5
ACR6	1	1.2
NOT DONE	21	24.1
Total	87	100

Table 11. Distribution of patients according to the result of the breast ultrasound.

Breast ultrasound	Effective	Percentage
Hyper echogenic	5	5.7
Hypo echogenic	34	39.1
Fluid infiltration	2	2.3
Heterogeneous mass	5	5.7
Suspicious mass	6	6.9
tissue mass	1	1.2
Inflammatory mastitis	1	1.2
Normal	3	3.4
Not made	30	34.5
Total	87	100

Table 12. Distribution of patients according to histology result.

Histological Type	Effective	Percentage
Breast adenocarcinoma	1	1.2
Invasive carcinoma of non-specific type	76	87.3
Breast carcinoma	5	5.7
Medullary carcinoma	1	1.2
Invasive papillary carcinoma	1	1.2
Phyllodes tumor	3	3.4
Total	87	100

Table 13. Distribution of patients according to SBR-EE grade.

SBR-EE grade	Effective	Percentage
Grade 1	15	17.2
Grade 2	44	50.6
Grade 3	28	32.2
Total	87	100

Table 14. Distribution of patients according to immunohistochemistry result.

Immunohistochemistry	Effective	Percentage
Triple negative	12	42.9
luminal B	2	7.1
Luminal A	6	21.4
HER2+	8	28.6
Total	28	100

Table 15. Distribution of patients according to site of metastasis.

Site of metastasis	Effective	Percentage
Hepatic	2	20
bone	6	60
Pulmonary	2	20
Total	10	100

Table 16. Distribution of patients according to TNM stage.

TNM stage	Effective	Percentage
Stade 1	3	3.4
Stade 2	41	47.2
Stade 3	33	37.9
Stade 4	10	11.5
Total	87	100

Chemotherapy was performed in 90.2% of cases (**Table 17**).

6.9% of patients had benefited from radiotherapy (**Table 18**).

10 patients or 11.5% had benefited from hormone therapy against 88.5% (**Table 19**).

The most performed type of surgery was mastectomy associated with axillary dissection, *i.e.* in 75.9% of cases (**Table 20**).

The postoperative course was simple in 89.7% of cases. A recurrence was found in 4.6% of cases (**Table 21**).

5. Comments

We found a prevalence of 32.8% of breast cancer in young women (**Table 22**), which is comparable to those of Samira in Marrakech [10] and Bouzid in Tunisia [11] who had respectively 18.6%, 10% and 7.5%; which is however different from the study by Znati *et al.* in Morocco [9].

11.5% of patients in our study had a personal history of breast pathology which was not proportional to those found by Bouzid *et al.* in Tunisia [11] and Jaba in Morocco [12]. Our study was statistically proportional to that of Samira in Marrakech [10] in 2019 (**Table 23**).

Table 17. Distribution of patients according to the feasibility of chemotherapy.

Chemotherapy	Effective	Percentage
No	8	9.2
Yes	79	90.8
Total	87	100

Table 18. Distribution of patients according to the feasibility of radiotherapy.

Radiotherapy	Effective	Percentage
No	81	93.1
Yes	6	6.9
Total	87	100

Table 19. Distribution of patients according to the feasibility of hormone therapy.

Hormone Therapy	Effective	Percentage
No	77	88.5
Yes	10	11.5
Total	87	100

Table 20. Distribution of patients according to the type of surgery performed.

Type of surgery	Effective	Percentage
Tumor excision	1	1.1
cleanliness mastectomy	14	16.1
Mastectomy plus axillary dissection	66	75.9
Quadrantectomy	6	6.9
Total	87	100

Table 21. Distribution of patients according to postoperative course.

Complication Surgery	Effective	Percentage
None	78	89.6
Disunity	1	1.2
Infection	1	1.2
Lymphedema	3	3.4
Recidivism	4	4.6
Total	87	100

In our series, we had 9 cases of family history of breast cancer at 10.3% proportional to 19.4% in the Senegalese series of Gueye *et al.* [13], to 15.3% in the Tunisian series of Bouzid [11] and 11.4% of the French series by M Guendouz *et al.* [14]. We do not have technology for the detection of genetic factors of breast cancer in Mali (Table 24).

Table 22. Frequency/authors.

Authors	Percentage	Statistical test
Samira Marrakech 2019 n = 78 [10]	10	0.0000579
Bouزيد Tunisie 2013 n = 124 [11]	7.5	0.00000268
Znati Maroc 2010 n = 74 [9]	18.6	0.1776
Our study Mali 2021 n = 87	32.8	----

Table 23. Personal history of breast disease.

Authors	Breast pathology (%)	Statistical test
Bouزيد Tunisie 2013 [11] n = 124	3.22	0.0292
Jaba Maroc 2016 [12] n = 23	4.34	0.0522
Samira Marrakech [10] 2019 n = 78	13	0.414
Our study Mali 2021 n = 87	11.5	

Table 24. Family history of breast cancer.

Authors	Background	Statistical test
Gueye 2016 Sénégal n = 62 [13]	12 (19.4%)	0.0824
Guendouz 2004 France n = 612 [14]	70 (11.4)	0.589
Bouزيد Tunisie 2013 n = 124 [11]	19 (15.3)	0.264
Our study Mali 2021 n = 87	9 (10.3%)	

The study by Khanfir *et al.* in Tunisia found a predominance of stage III with 16.3% (**Table 25**), which is proportional to our study and that of M Guendouz *et al.* in France with 37.9% and 38% respectively.

Thus, grade II of the SBR classification represented 50.6% of cases in our series (**Table 26** & **Table 27**). This is consistent with data from Bouزيد in Tunisia. Grade 3 was the most represented in the study by Fleurier *et al.* [17] in France and that of Ayyad [16] in Morocco, *i.e.* in 49% of cases for each.

In our series, we found a predominance of mastectomy associated with axillary dissection (MCA). They were found in 66 patients 75.9% (**Table 28**). This is related to the study by Jaba in Morocco [12] on 23 cases of breast cancer in young women, shows that 82% of patients had benefited from a mastectomy plus axillary dissection. The study by Bouزيد *et al.* [11] had a rate of mastectomy plus axillary dissection in 63.5% of cases, which is proportional to ours.

Our study found 90.8% of cases of use of chemotherapy as treatment (**Table 29**). This result is in line with the results of other authors such as Guendouz in France [14] with $p = 0.1253$, Bouزيد in Tunisia with a $p = 0.4071$ and Gueye who found 89% of chemotherapy benefited in his study, with $p = 0.2492$. This could be explained by the sample size.

In our study, 11.5% of patients benefited from hormonal treatment (**Table 30**). This rate is relatively low compared to those of other authors such as Khanfir

Table 25. TNM stage/authors.

Authors	Stage III	Stage IV
Khanfir Tunisie [15] 2006 n = 72	16.3 p = 0.00036	7 p = 0.229
Guendouz France [14] 2010 n = 612	38 p = 0.557	21.5 p = 0.0407
Our study Mali 2021 n = 87	37.9	11.5

Table 26. Histology/authors.

Authors	Histology	Statistical test
Guendouz France [14] 2010 n = 612	CCI 83%	0.276
Gueye Senegal [13] 2016 n = 62	CCI 85.5%	0.0487
Znati Maroc [9] 2010 n = 74	CCI 75.67%	0.0338
Our study Mali 2021 n = 87	CCI 87.4%	

Table 27. Grade SBR-EE/authors.

Authors	Grade SBR-EE	Statistical test
Ayyad Maroc [16] 2010 n = 48	Grade 3 (49%)	0.4437
Bouزيد Tunisie [11] 2013 n = 124	Grade 2 (41.1%)	0.10076
Fleurier France [17] 2017 n = 155	Grade 3 (49%)	0.4437
Notre étude Mali 2021 n = 87	Grade 2 (50.6%)	

Table 28. Authors/type surgery.

Authors	type of surgery	Statistical test
Ayyad Maroc [18] 2010 n = 48	MCA 72.2%	0.3144
Jaba Maroc [12] 2016 n = 23	MCA 82%	0.1927
Bouزيد Tunisie [11] 2013 n = 124	MCA 63.5%	0.0324
Notre étude Mali 2021 n = 87	MCA 75.9%	

Table 29. Authors/chemotherapy.

Authors	Chemotherapy	Statistical test
Guendouz France [14] 2010 n = 612	95.9%	0.1253
Gueye Senegal [13] 2016 n = 62	87.1%	0.2492
Bouزيد Tunisie [11] 2013 n = 124	89%	0.4071
Notre étude Mali 2021 n = 87	90.8%	

Table 30. Hormone therapy/authors.

Authors	Hormone Therapy	Statistical test
Khanfir Tunisie [15] 2006 n = 72	50%	0.0000
Guendouz France [14] 2010 n = 612	36.1%	0.000023
Samira Maroc [10] 2019 n = 78	49%	0.00000
Notre étude Mali 2021 n = 87	11.5 %	

Tunisie [15], Guendouz France [14] and Samira Maroc [10] who had 50%, 36.1% and 49% respectively. This is due to the difficulty of access of our patients to hormone therapy.

6. Conclusion

Breast cancer is a real public health problem, the number of new cases continues to increase in our country. We collected 87 cases of breast cancer in women under 41 years old. Young age is often associated with anatomo-clinical and evolutionary parameters of poor prognosis, among which we can cite diagnostic delay, the frequency of advanced forms with a larger tumor size, more frequent histological lymph node involvement, a higher histological grade. Often high, more frequent locoregional and distant recurrences, and finally poor overall survival.

Conflicts of Interest

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

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