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Survival of Patients Operated on for Breast Cancer in Yaounde: A Study of 166 Cases

Survie des patientes opérées du cancer du sein à Yaoundé: une étude 166 cas

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ABSTRACT

Introduction. Breast cancer is one of the main causes of death in the world. Survival varies widely around the world, being better in developed countries. The aim of this work was to estimate the survival of patients operated upon for breast cancer at the HGOPY. **Methodology.** This was a descriptive study with historico-prospective collection of data from patients operated upon for breast cancer at the HGOPY (2010-2020). Survival was estimated by the Kaplan-Meier method. The original date was the date of surgery and the conclusion date was the date of death or latest news. **Results**. The mean age of the 166 operated patients was 48.27 ± 12.44 years. About 48.2% had a T4 stage. Radical surgery performed in 92.2%. Overall survival at two, three and five years was 79.4%, 73.4% and 62% respectively. Mortality was higher in the first three years and gradually stabilized to remain constant after the fifth year. The mean survival time was 93 months ± 6 months. Five-year survival was 100% for clinical stages T1, 76.1% T2, 67.9% T3 and finally 48.6% for T4 (p=0.064). **Conclusion.** The survival of patients operated on for breast cancer at 2 years was 79.4%, at 3 years 73.4% and at 5 years 62%. Mortality was higher in the first three years.

INTRODUCTION

Breast cancer is one of the leading causes of death worldwide [1]. Its incidence, mortality and survival rate vary across the world [2]. Worldwide breast cancer mortality has increased over the past ten years, from 458,000 deaths in 2008 to 684,996 deaths in 2020 [1]. Survival varies widely around the world, being better in developed countries. In Cameroon, like the global trend, the incidence rate has increased to about 4170 new cases of breast cancer (20.1%) recorded in 2020, with a mortality of 2108 deaths [3]. Although efforts have been made by the Cameroonian State, breast cancer remains a real public health problem and the overall 5-year survival varies from 30 to 62%. The aim of this work was to estimate the survival of patients operated on for breast cancer at the HGOPY.

METHODOLOGY

This was a descriptive study with retrospective collection of data from 166 breast cancer patients at the HGOPY from January 1, 2010 to December 31, 2020, i.e. a study period of 11 years. Any patient whose file did not contain the diagnosis, the date of surgery, and the latest news was excluded. The files were therefore considered unusable

because they did not allow survival calculations. We completed the missing information, the data relating to survival that did not appear in the files directly from the patients or their relatives, through a telephone conversation. The analysis was done using SPSS version 23.0. Survival was estimated by the Kaplan-Meier method. The original date was the date of surgery and the conclusion date was the date of death or latest news.

RESULTS

We have listed 258 patients operated on for breast cancer from 2010 to 2020 at the Gyneco-Obstetrics and Pediatric Hospital of Yaoundé. We retained 166 files of operated patients meeting the inclusion criteria. During the follow-up of the 166 operated, 39 died, 24 lost sight and 103 alive until the closing date of our study.

Profile of operated patients

The age of the 166 operated patients varied between 20 and 84 years with an average of 48.27 ± 12.44 years. About 48.2% had stage T4, 59% lymph node invasion and 10.8% were metastatic. Invasive ductal carcinoma was more common (91.6%) and grade II was more common (54.2%) (Table I).

Table I clinical and paraclinical data of the patients (N=166)

Variables	Number	%
Age groups (n=166)		
20 to 29 years old	12	7,2
30 to 39 years old	30	18,1
40 to 49 years old	**49**	**29,5**
50 to 59 years old	45	27,1
60 years and over	30	18,1
TNM clinical stage		
T		
1	5	3,0
2	46	27,7
3	35	21,1
4	**80**	**48,2**
N		
0	68	41,0
1	**78**	**47,0**
2	18	10,8
3	2	1,2
M		
0	148	89,2
1	18	10,8
Histological type (n=166)		
Invasive ductal carcinoma	**152**	**91,6**
Invasive lobular carcinoma	7	4,2
Phyllodes sarcoma	6	3,6
Invasive mucinous carcinoma	1	0,6
SBR grade (n=166)		
I	32	19,3
II	**90**	**54,2**
III	44	26,5

Treatment modalities and tumor recurrence

Radical surgery was performed in 92.2%.
The majority of patients (97%) received chemotherapy. Hormonal therapy prescribed in 37.3% and radiotherapy performed in 62%.
Overall, 20% had tumor recurrences (Table II).

Table II therapeutic characteristics (N=166)

Variables	Number	%
Therapeutic modalities		
Conservative surgery	13	7,8
Radical surgery	153	92,2
Axillary curage	152	91,6
Chemotherapy	161	97,0
Hormone therapy (n=150)	56	37,3
Radiotherapy (n=150)	93	62,0
Occurrence of recurrence (n=150)	30	20,0
Location of recurrence (n=30)		
Scar or homolateral breast	**10**	**33,3**
Homolateral Axilla	**7**	**23,3**
Breast controlateral	2	6,7
Lungs	3	10,0
Pleura	2	6,7
Bones	**6**	**20,0**
Liver	2	6,7
Brain	2	6,7

Evaluation of survival

The survival of patients operated on for breast cancer at 2 years was 79.4%, at 3 years it was 73.4% and at 5 years 62%. The slope of the survival curve reveals that mortality was higher in the first three years and tended to stabilize after this period and to remain constant after the fifth year. Moreover, this curve reveals that the majority of those lost to follow-up were also recorded during the first two years of follow-up (Figure 1).

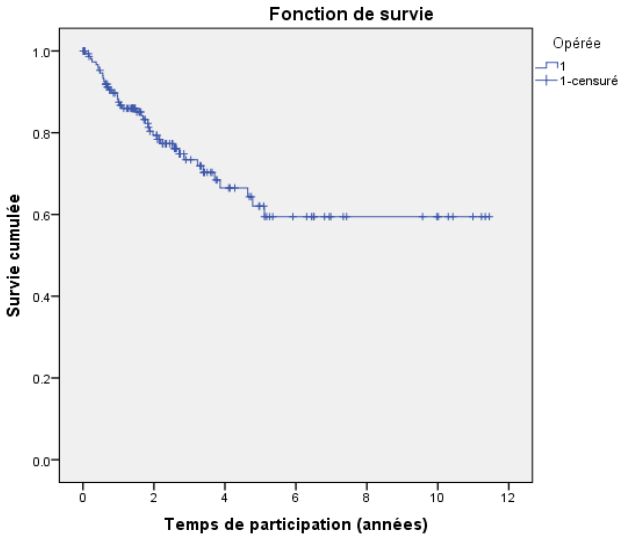

Figure 1 Survival curve for breast cancer patients (N=166)

The median survival after surgery in our study population was not reached, however the first quartile was Q1 = 32.63 months or 2.72 years. However, the average survival time is 93 months ± 6 months (IC: 81-105) or 7.75 years. The minimum duration of follow-up was 0.133 months or 4

days and the maximum duration was 137.4 months or 11.42 years (Figure 1).
The 5-year survival of operated patients according to tumor stage T finds a survival of 100% for T1, 76.1% for T2, 67.9% for T3 and finally 48.6% for the T4 group. The study of their survival curves after surgery shows us that there is no statistically significant difference between these four population subgroups (p=0.64) (Figure 2).

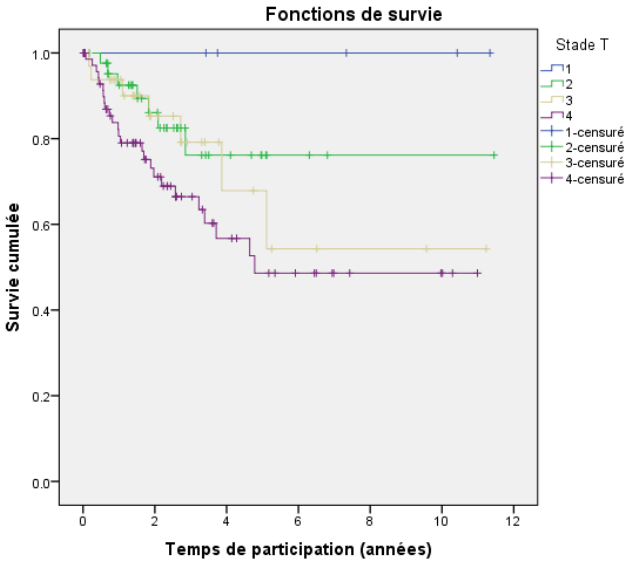

Figure 2 Comparison of survival curves by tumour stage

No deaths were recorded in the first T1 group.
In the T2 group, all deaths occurred during the first three years following surgery, then a stabilization of survival was observed without the first quartile being reached.
In the T3 group, as in the T2 tumor group, the median survival time was not reached. Nevertheless the 1st quartile was Q1=46.37 months or 3.86 years.
However, in the last T4 group, the 5-year survival was lower than the overall survival. The median survival time is 57.367 months or 4.78 years. And the first quartile is Q1=22.63 months.

DISCUSSION

The 5-year survival of patients operated on for breast cancer was 62%. Mortality was higher in the first three years. The median survival after surgery in our study population was not reached, however the first quartile was Q1 = 32.63 months or 2.72 years. This means that the death rate in our population did not reach 50% during the follow-up period. However, 25% of those operated on died before the age of 2.72. These results are similar to those observed in Africa; and close to 5-year survival of 58.6% in the study by Esson et al. in 2019 [3]and this 5-year survival follows Indian and African trends. In Africa in general and in sub-Saharan Africa in particular, low 5-year survival rates close to 50% have been reported [4,5]. In Tunisia, survival rates of 50.5 and 58% were described in 2002 and 2006 [6]. South Africa in 2018 recorded survival rates of 61% at 5 years[7]. On the other hand, this rate is twice as high as that found by Kemfang et al in 2015 in Cameroon, in a study carried out over the period from 1995 to 2007, where the 5-year survival was 30% [8]. This difference could be explained by the fact that our study focused on patients whose follow-up is recent from 2010 to 2020, where the care would be a great asset, especially with the multidisciplinary care and the contribution of the hormone therapy. However, our 5-year survival rate is rather low compared to those observed in Japan and Sweden, which found survival rates of around 80% in women with breast cancer [9]. The 5-year survival was 73% and 85% in African American and White American women respectively [4]. In 2016 in France, the 5-year survival rate for breast cancer was 88% [10]. These variabilities in survival observed in Africa and elsewhere could be explained by the fact that in African countries, more than half of the patients had advanced stages at diagnosis on one hand as in our sample, and on the other hand, financial, geographical and therapeutic accessibility are limited, and the use of alternative therapies and the problems of therapeutic observance are significant [11].

CONCLUSION

It appears from our study that the survival of patients operated on for breast cancer at 2 years was 79.4%, at 3 years 73.4% and at 5 years 62%. Mortality was higher in the first three years. Although the overall 5-year survival has been improved, it would be beneficial to strengthen the follow-up of patients for the first three years in order to reduce the rate of loss of follow-up and early mortality observed.

Conflicts of interest

None

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