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Epidemiological Profile of Breast Neoplasia in the Municipality of Valença (RJ Brazil): Study from 2009 to 2017

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Abstract

Breast neoplasms are the main oncological pathology in Gynecology and Obstetrics, with increasing rates of incidence and mortality in the female population. According to the World Health Organization (WHO), more than 1 million new cases of breast cancer are diagnosed worldwide every year. This study aims to understand and analyze the epidemiological profile of patients diagnosed with breast cancer in the last nine years in the city of Valença—RJ, Brazil. A descriptive, documentary-retrospective analysis was carried out from January 2009 to December 2017, on 96 records of women who underwent breast biopsy at the Escola Escola de Valença (HEV), referred by the HEV Gynecology outpatient clinic. The results compared the variables age, race, parity, alcoholism, smoking, comorbidities, histological type, family history and screening performed with the scenario of breast cancer in the world, concluding that it is essential to identify patients at risk development of breast cancer to guide prevention, screening and early detection of pathology. The cases in the municipality are similar to other studies in relation to smoking, alcohol consumption, associated comorbidities, histological type and family history. However, the prevalence in younger people stands out, as well as the high percentage of women who have not had previous screening, which highlights the importance of the development and spread of women's health in this city in the south of the state.

Keywords

Breast Neoplasia, Epidemiological Profile, Comorbidity

1. Introduction

Currently, the most effective means for early detection of breast cancer, according to National Cancer Institute (INCA), are evaluation of people with initial signs and/or symptoms of the disease, and the screening in the asymptomatic population hopying identifying suggestive lesions and start the propaedeutics. Breast self-examination is not an isolated strategy for early detection. It is recommended as a health education action, contemplating knowledge about the body [1].

According to mammography, it represents the main method of diagnosis of breast cancer at an early stage, showing the ability to detect changes that are not yet palpable, in order to provide early, less aggressive, more effective treatment and consequently leading to better aesthetic results. However, although mammographic screening significantly reduces mortality from breast cancer, there are controversies about its effectiveness, especially in women under 50 years of age [2].

Breast cancer has a good prognosis when diagnosed early and when timely treatment is carried out, mortality rates remain high in Brazil, in view of late diagnosis already in advanced stages, with an average survival in the population of 61% in five years [3].

The study on the profile of women with breast cancer can provide a greater understanding of the patterns of occurrence of the disease, assess flaws in secondary prevention actions and, concomitantly, allow the development of new strategies for health care at all levels of health [4].

2. Literature Review

Breast cancer is the second most frequent malignant disease in women, but is responsible for the highest number of cancer deaths among women in Brasil. The breast cancer is incommon in young women, therefore the diagnosis requires elevated index of clinical suspicion, because several studies have shown that in younger women tends to be more aggressive [5].

The righ prevalence of breast cancer morbidity and mortality in women in Brasil, make necessary the need for actions to control this disease and effective screening in the target population. Mammography is the main screening test, however the performance index in Brasil is low, showing the need for the public health network to support discussions for better care management in the early detection of breast cancer [6].

3. Objectives

To know and analyze the epidemiological profile of patients diagnosed with breast cancer in the last nine years in the city of Valença—RJ, Brazil.

4. Methodology

This is a descriptive, documentary-retrospective and cross-sectional study car-

ried out in the municipality of Valença (RJ), Brazil from January 2009 to December 2017.

The studied population were women attended at Hospital Escola de Valença with breast disease and who underwent biopsy during the mentioned period, women who had a negative biopsy for breast cancer were excluded from the study. The epidemiological profile of patients who had a positive histopathology for neoplasia was then analyzed.

The retrospective analysis of the medical records allowed to select variables such as: age, race, parity, comorbidities (arterial hypertension, diabetes and metabolic syndrome), histological type of the tumor, alcoholism, smoking, family history of breast cancer and screening. Variables were analyzed according to data in medical records, organized in tables and graphs according to epidemiological characteristics and personal and family history.

Through the information obtained from the medical records, a descriptive statistical analysis, frequency tables and cross tables were carried out, establishing relationships between the variables studied, in order to verify aspects relevant to the research. This research was approved by the ethics committee of the Faculty of Medicine of Valença, CAAE: 01691418.5.0000.5246.

5. Results

96 Medical records of women who underwent breast biopsy at the Escola Escola de Valença (HEV), referred by the HEV Gynecology outpatient clinic, during the study period were analyzed. Table 1 shows the epidemiological profile of the sample, out of a total of 96 women analyzed, 46 had a positive biopsy result for breast cancer.

The analysis of Table 1 shows a higher prevalence of positive biopsy for breast cancer in women aged 37 to 56 years (54.35%), equal prevalence among white and black women (34.79%) and little variation in parity.

When evaluating the variable that addressed smoking and drinking history, it was noted that most women denied smoking (73.92%) and alcoholism (89.14%).

Table 2 discusses the presence of comorbidities present in the study participants.

It was noted in the study of medical records that the majority (54.35%) of women, although with a small percentage of variation, did not have comorbidities diagnosed at the time of breast biopsy. 21 women with comorbidities, about 61.90% had hypertension and 38.10% had diabetes.

Table 3 shows the characterization of the histological type of breast cancer found in the samples taken from breast biopsies.

Invasive ductal carcinoma is the largest group of carcinomas found in histological reports, corresponding to 76.09% of the total of 46 biopsies, followed by invasive lobular carcinoma with 6.53% prevalence.

Figure 1 shows the relationship between positive breast biopsy and family history of first degree breast cancer, showing that 17% of patients had a family

history of breast cancer.

Another important variable analyzed in the study, as Figure 2 shows, was the screening for breast cancer, a practice that is recommended and emphasized by the Ministry of Health and other institutions that care for women's health, with the duty to be offered to all women who fall under the tracking requirements. It was observed that 54% of the participants did not undergo screening.

Table 1. The epidemiological profile of woman with positive biopsy result for breast cancer.

Age Range	Positive Biopsy	%
16 - 26 years	0	0
27 - 36 years	2	4.35
37 - 46 years	13	28.27
47 - 56 years	12	26.09
57 - 66 years	7	15.22
67 - 76 years	6	13.05
77 - 86 years	3	6.53
87 - 96 years	3	6.53
Race		
White	16	34.79
Black	16	34.79
Brown	14	30.44
Indigenous	0	0
Parity		
Nulliparity	8	17.4
01 Child	8	17.4
02 Children	8	17.4
03 Children	8	17.4
04 Children or more	3	6.53
Not informed	11	23.92
Tabagism		
Yes	12	26.09
No	34	73.92
Elitism		
Yes	5	10.88
No	41	89.13
Total	46	100

Table 2. Distribution of the frequency of information on comorbidities (arterial hypertension, diabetes and metabolic syndrome) among the women participating in the study.

Comorbidity	N	%
Yes	21	45.66
No	25	54.35
Total	46	100

Table 3. Histological characterization of the types of carcinoma found in the analysis of the biopsies of the study participants.

Histopathological	N	%
Invasive ductal carcinoma	35	76.09
Invasive lobular carcinoma	3	6.53
Ductal carcinoma *in situ*	1	2.18
Anaplastic carcinoma	1	2.18
Unspecified carcinoma	1	2.18
Mixed ductal and lobular carcinoma	1	2.18
Mesenchymal Carcinoma (Sarcoma)	1	2.18
Paget's disease	1	2.18
Invasive Mucinous Carcinoma	2	4.35
Total	46	100

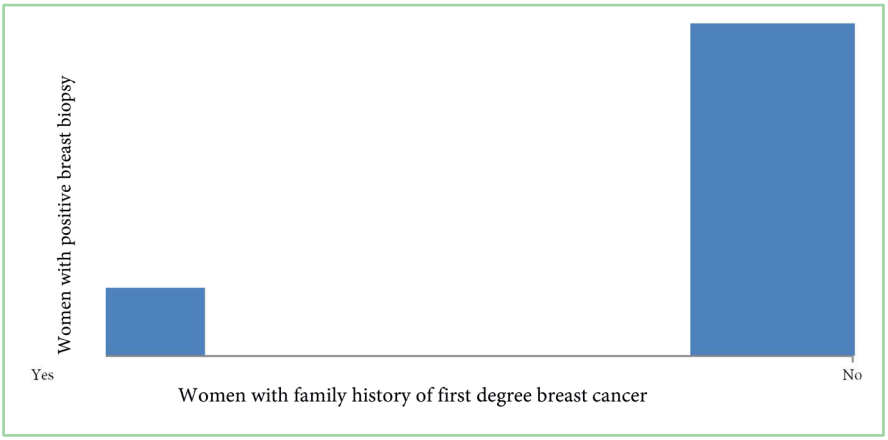

Figure 1. The relationship between positive breast biopsy and family history of first degree breast cancer.

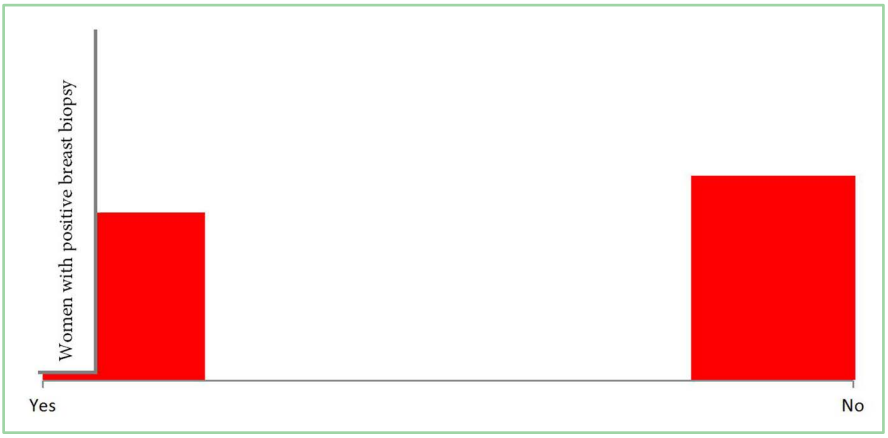

Figure 2. Percentage of wowen who did the screening for breast cancer with positive breast biopsy.

6. Discussion

After Breast cancer is the second most prevalent neoplasm in the world, second only to lung cancer, and is responsible for at least 2 million new cases per year, considered the leading cause of death from cancer in women according to WHO [5].

The incidence of breast cancer in the United States increases with age, especially from the age of 60, data from the Surveillance, Epidemiology and Final Results database (SEER) state that the probability of a woman developing breast cancer is 1 every 29 women after the sixth decade of life [6]. In our study, there was a higher incidence between 37 and 56 years, which corresponds to more than half of the sample (54.34%), drawing attention to the early appearance of breast cancer in women in the municipality of Valença—RJ.

Analyzing the ethnic aspects, breast cancer is the most prevalent among women of all ethnic groups; however it is noted that in black women the diagnosis of the disease is frequent in more advanced staging, resulting in a worse prognosis [7]. This statistic is attributed to conditions of social inequality in force in Brazil, causing precarious access to health resources. The participants analyzed in the present study had a similar ethnic distribution, with an equal prevalence among whites (34.78%) and blacks (34.78%), followed by browns (30.43%).

As for parity, it was noted that in the sample from the municipality of Valença—RJ, the relationship between nulliparity and multiparity showed little variation in the incidence of positive biopsies for breast cancer. Studies discuss whether multiparity does in fact provide protection against breast cancer, placing the probability of a protective effect after decades of childbirth, also reporting studies that suggest a decrease in risk with an increase in the number of pregnancies [8].

Habits such as alcoholism are associated with an increased risk of developing breast cancer, even among women with low alcohol consumption [9]. Smoking, too, although with differences, is identified as a risk factor for breast cancer [10].

In our study, 26.08% were smokers and only 10.87% were alcoholics, with no major repercussions in the studied sample.

Regarding the histological type found in the 46 breast biopsies positive for neoplasia in the present study, the invasive ductal carcinoma type was found in 35 women, in fact, this is the most commonly diagnosed histological type [11].

Invasive lobular carcinoma is the second most prevalent type, representing about 5% to 10% of invasive lesions, in the United States its incidence rate has been increasing more than that of invasive ductal, which is believed to be related to replacement therapy hormonal [11]. In our study, invasive lobular carcinoma was diagnosed in 6.52% of biopsies, approximately 13 times less than the invasive ductal carcinoma.

Other histological types, such as anaplastic, mixed, mesenchymal and invasive mucinous were diagnosed in only 1 and, in the case of the invasive mucous, 2 cases among the participants. These diagnoses were even more rare in the pre-mammographic period, only with the advent of this new examination technique did more cases be discovered [11].

A case of Paget's disease stands out in the sample of the present study; it is an uncommon presentation of breast cancer, but an important differential diagnosis with persistent chronic changes of the papilla. Clinically, it is characterized by a scaly, ulcerated lesion that involves the papillary-areolar complex, the definitive pathological finding being the cells of malignant intraepithelial adenocarcinoma in the epidermis of the papilla, and a biopsy of full thickness of the papilla is of utmost importance [12].

Comorbidities such as systemic arterial hypertension, diabetes miellitus and metabolic syndrome are identified as risk factors for the development of breast cancer, despite this, studies corroborate that women with breast cancer have a higher risk of having future cardiovascular events [13]. In the survey conducted in Valença—RJ during the study period, when analyzing the presence of comorbidities in the patients in the sample, it was observed that 45.65% had some chronic non-communicable disease in continuous treatment.

One of the most relevant data in the study is the presence of a positive first-degree family history for breast cancer, in an analysis [14] carried out with 50,000 women with breast cancer and 100,000 controls, it was observed that the occurrence of the disease doubled in cases of history of a first-degree relative and tripled in the case of two first-degree relatives with previous breast cancer. Another important data in this analysis, are the relationship between the risks being three times greater when the first degree relative was diagnosed before the age of 30. In our analysis, 17% of patients had a history of first-degree breast cancer, and, again, it should be noted that 54.34% of women were diagnosed with the pathology before the age of 60.

Within the scope of breast cancer screening practice, advocated by the Ministry of Health as the right of all women aged 50 to 69 years biannually through mammography. In contrast, the Brazilian Society of Mastology, INCA, Colégio

Brasileiro de Radiologia [15] and FEBRASGO recommend that mammography be performed annually in women aged 40 to 69 years, and FEBRASGO discusses the performance up to 74 years, preferably with digital technique. In the municipality of Valença—RJ, of the 46 women with breast cancer, 54% did not undergo periodic screening, and approximately 31 women were aged within the requirements of the Ministry of Health.

7. Conclusions

In this study on breast cancer cases in Valença—RJ, it was possible to conclude that in some aspects the reality in this municipality is similar to the others, with regard to histological type, associated comorbidities, family history, race and social habits.

However, the early age at which most cases were diagnosed, in comparison to the age group most commonly affected in the world, leads to a serious discussion about whether screening should in fact begin as recommended by the Ministry of Health, and the necessary periodic clinical approach of women in the municipality.

It is essential to identify patients at risk of developing breast cancer in order to guide prevetion, screening and early detection of pathology. The numbers of cases in the municipality stand out, especially among younger women, which highlights the importance of the development and spread of women's health in this city in the south of Rio de Janeiro state.

Conflicts of Interest

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

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