

Risk Factors Associated with Breast Cancer

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ABSTRACT

Background: It is reported that genetic and hereditary-familial risk factors for breast cancer contribute 5% and the majority are related to the reproductive life of women. Objective: it has the purpose of determining if the factors considered as risk factors are associated with breast cancer in a group of Mexican women.

Material and Methods: A retrospective, observational and descriptive study was carried out in 162 women with breast cancer for 3 years (2002-2004) at the Hospital Juárez de México to determine if the usual risk factors are related to breast cancer. The descriptive analysis included localization and dispersion measures, as well as a graphical analysis using bar diagrams.

Results: In the sample of 162 women with breast cancer, the age range at the time of breast cancer diagnosis was from 27 to 78 years (mean of 47.60, standard deviation of 13.09); early menarche only appeared in 12.3% (n=20). The mean age of the first pregnancy was 22 years and of menopause at 51 years of age; 72.2% lactated (n=117) and 45.1% did so for more than 6 months (n=73); the menstrual pattern disorder appeared in 22.8% of cases (n=37); Menopausal hormone therapy was previously used in 19.8% (n=32). The hereditary-family history of breast cancer appeared in 14.2% of the cases (n=23). It seems to be correlated with the fact that in patients with nulliparity, alcoholism and the absence of breastfeeding, breast cancer occurs at an early age (<45 years) and the risk factor that is related to breast cancer is overweight and obesity with 54.26% and 17.11% respectively (average of 28.00, standard deviation of 3.032).

Conclusion: no correlation was found between risk factors considered common for breast cancer; only overweight and obesity were related to its development, further research is required to confirm whether this correlation occurs in other countries.

Keywords:

Breast cancer, Risk factors, Obesity, Hereditary-family history, Menopause .

Introduction

In Mexico, breast cancer is the second most common site of cancer in women and most developed and emerging countries [1]. Incidence rates have increased in many countries, although in some the mortality has remained stable with a slight reduction [2]. There are geographical differences with high rates of breast cancer in North America, Northern Europe, and Oceania, to a lesser extent in Central and South America, as well as in South and East Europe; low-risk countries are Africa and Asia [3]. It is reported that genetic and hereditary factors constitute less than 5% of cases and only risk factors for breast cancer that are related to the reproductive life of women [4]. This work was carried out to determine if the Risk factors considered classic are associated with breast cancer in our sample of Mexican women studied.

Material and Methods

A retrospective, observational and descriptive study was carried out in 162 women with breast cancer over 3 years (2002-2004) in the Oncology Gynecology Service of the Hospital Juárez de México to determine whether reproductive risk

factors are factors that are in these patients related to breast cancer. Patients with a complete medical record and a diagnosis of breast cancer were included. The variables studied were: age at the time of breast cancer diagnosis, age at menarche, duration of breastfeeding, number of pregnancies, age of first delivery, history of the use of menopausal hormone therapy. Also, other variables such as body mass index, diabetes mellitus, arterial hypertension, alcoholism, and a family inherited a history of breast cancer were studied. The statistical analysis was performed using the SPSS statistical package, after data capture in the Microsoft Excel program for Windows 2003. This descriptive analysis included localization and dispersion measures, as well as a graphic analysis using bar diagrams, histograms, and box plots.

Results

The sample size was 200 patients, of which 38 were excluded due to not having inclusion criteria and only 162 patients were studied. The age range at the time of breast cancer diagnosis was 27 to 78 years (mean 47.60, standard deviation 13.09) (Figure 1) early menarche occurred only in 12.3% (n=20) of patients; 64.4% (n=104) presented menarche between 12 and 13 years of age. The mean age at breast cancer diagnosis for the early menarche group was 55 years of age and for the overall group, it was 47.6 years of age. The mean age of the first pregnancy was 22 years

of age and menopause at 51 years of age; 54% of patients had 3 pregnancies; 72.2% breastfed (n=117) and 45.1% was for more than 6 months (n=73); menstrual disorders occurred in 22.8% of

cases (n=37), oligomenorrhea predominating in 43.3% of cases (n=16); Menopausal hormone therapy was previously used in 19.8% (n=32).

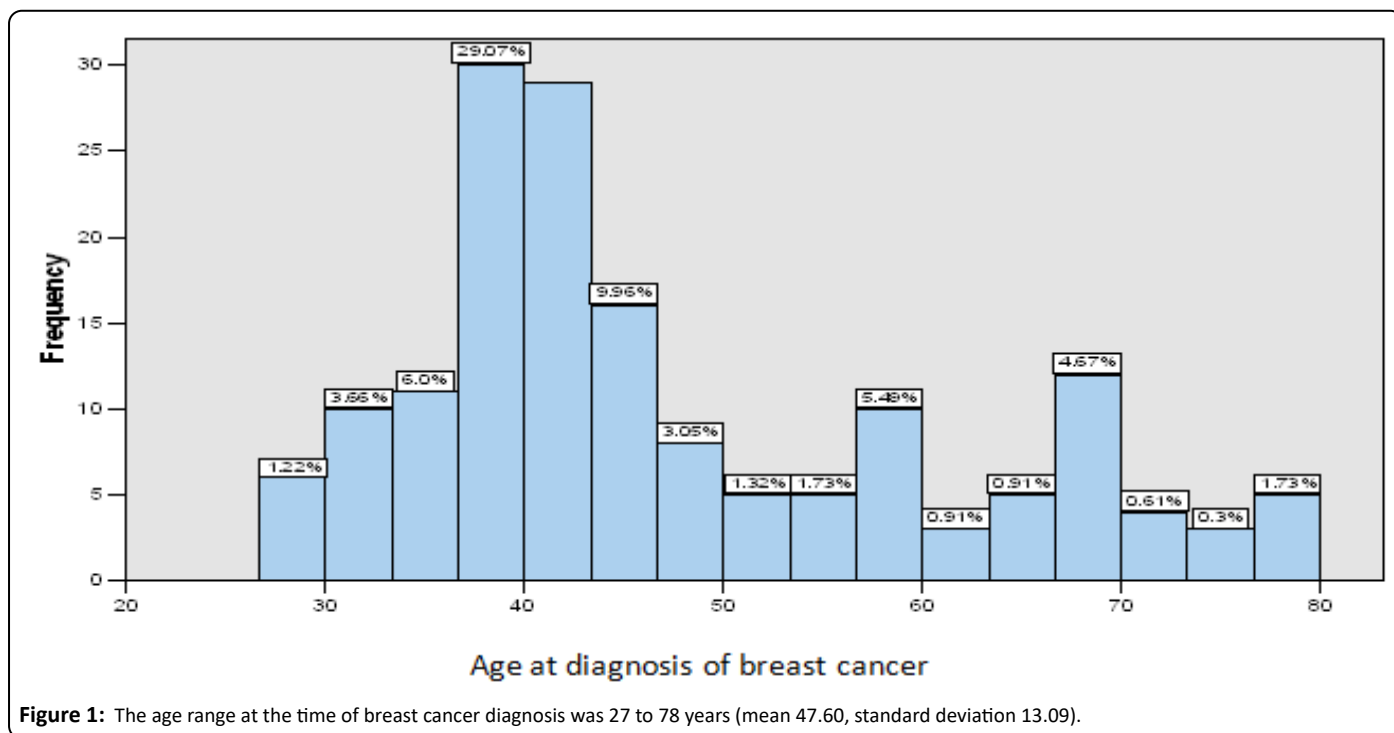


Figure 1: The age range at the time of breast cancer diagnosis was 27 to 78 years (mean 47.60, standard deviation 13.09).

A family history of breast cancer was presented in 14.2% (n=23) and smoking in 11.1% (n=18). It was correlated that nulliparous patients, with alcoholism and absence of breastfeeding, breast cancer occurred in those under 45 years of age and only the

risk factor that was related to breast cancer was overweight and obesity with 54.26 and 17.11% respectively (mean 28.00, standard deviation 3.032) (Figure 2).

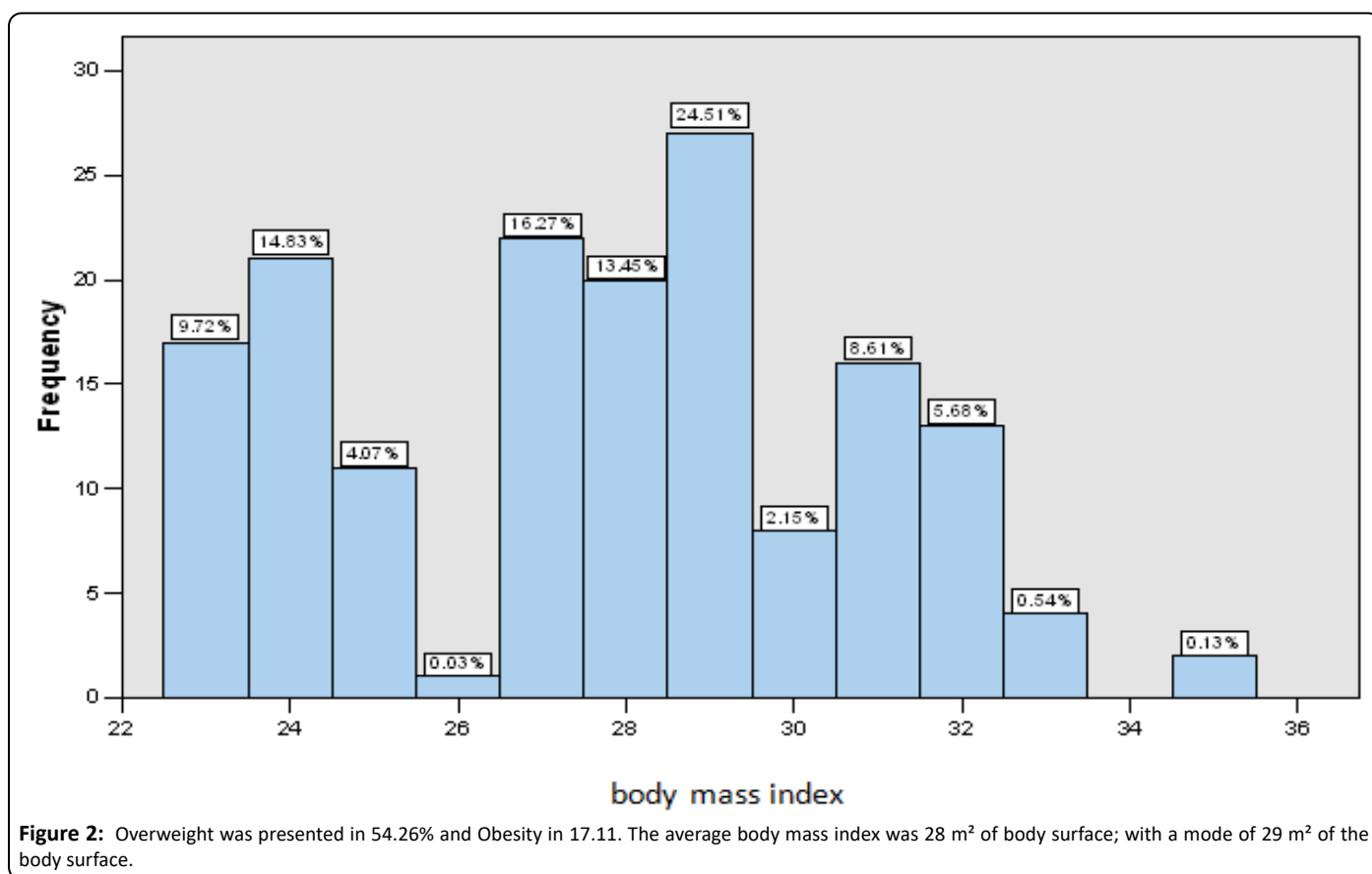


Figure 2: Overweight was presented in 54.26% and Obesity in 17.11%. The average body mass index was 28 m² of body surface; with a mode of 29 m² of the body surface.

Discussion

There are risk factors associated with breast cancer that is usually considered important, based on our study; where risk-reducing surgery is performed, instead of observation periods [5]. The documented risk factors are different according to the population studied and the age of presentation is the best-studied, where the incidence of breast cancer before 30 years of age is low [6]. The patients in our study the average age was (43 years) at the diagnosis of breast cancer lower than that reported in the literature [1,7].

Other reports of women with menarche before the age of 12, increased the relative risk of 1.3 of invasive breast cancer compared, with those, if they started it after 15 years, and in the present study early menarche only appeared in 12.3 % of cases were not observed to be associated with early detection of breast cancer [8].

A higher risk is also reported in nulliparous women or those who had their first childbirth after the age of 30, in the present study this relationship was not observed either and nulliparity was only present in 15.4% and women who had a child after 30 years was 2.37% [9]. The absence of breastfeeding was also considered a risk factor; [10] in our study, 72.2% lactated and did not show a relationship, only the absence of breastfeeding was related to the appearance of breast cancer at an earlier age (less than 42 years), in the same study a significant relationship was reported with the use of oral contraception, while in this sample only 25.3% had this antecedent, an increase in the incidence of breast cancer was also reported with the use of menopausal hormone therapy, without being observed in the sample that was studied, only 19.8% had this antecedent and 3.7% used it for more than 5 years [11].

A relationship between alcohol consumption and smoking with an increase in breast cancer is reported, which was also not observed in this study, only patients with alcohol consumption had breast cancer at an earlier age [12]. It is observed that a high body mass index is a lower risk factor, unlike the sample studied, a greater correlation with breast cancer was found with a BMI greater than 25m²sc [13], a risk of 1.8 is also reported for women with a history of family cancer while this study was found to occur in 14.2% of cases [14]. The results obtained from this study surprise us that of all the usual risk factors reported, they do not seem to correlate in our sample; only a strong correlation exists between overweight, obesity, and breast cancer, which needs to be confirmed with randomized control groups; This highlights the importance of having our epidemiology in Mexican women; Current and future studies are based on molecular biology with the genes involved in the breast cancer process [15] as part of a strategy in the evaluation of a definitive risk of breast cancer [16].

Conclusion

No correlation was found between the usual risk factors associated with breast cancer; only overweight and obesity are related; further research is required in other different countries and to study other risk factors involved in the genesis of breast cancer such as inflammatory factors, insulin-like growth factors and hyperinsulinism [17].

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