



Association between obesity and breast cancer in premenopause

  10.56238/homeinternationalanais-122

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1 INTRODUCTION

In Brazil, excluding non-melanoma skin tumors, breast cancer is the most frequent in women. The number of cancer deaths has also increased, from 6.2 million in 2000 to 10 million in 2020. More than one in six deaths is due to cancer (WHO, 2021). In addition to well-established risk factors such as female gender, age, positive family history, genetic mutations, proliferative changes in the breast, high breast density, early menarche, late menopause and exposure to radiation, some researchers associate body constitution with the risk of development of breast cancer. As obesity and cancer are diseases that affect millions of people and have important consequences, it is necessary to identify the relationship between these two events.

2 OBJECTIVE

The aim of this study is to define whether there is an association between obesity and breast cancer in premenopausal women.

3 METHODOLOGY

This is an integrative literature review carried out in August 2022 that used the Health Sciences descriptors (DeCS) together with the Boolean operator “AND”, which resulted in the descriptor: “Obesity” AND “Breast cancer” AND “Premenopausal ” It was developed in the following virtual libraries: National Library of Medicine (PUBMED), Medical Literature Analysis and Retrieval System Online (MEDLINE), Latin American and Caribbean Literature in Health and Social Sciences (LILACS) and The Scientific Electronic Library Online (SCIELO). Inclusion criteria were: publications made in English and/or Portuguese between 2012 and 2022, which contained the selected descriptors. Articles not available in full through the databases were excluded, in addition to those that were duplicated.

4 DEVELOPMENT

Lines of evidence supporting the association between obesity and breast cancer include pathways related to inflammation, insulin resistance, and hormone synthesis. In pre-menopause, studies indicate an inverse relationship between these two factors, that is, obese patients would have a lower risk of cancer;



with the exception of Asian women, who are at increased risk. Research results indicate the importance of maintaining a healthy weight, avoiding foods with a high fat content and practicing physical activity. Therefore, weight reduction is a cancer prevention tool, especially for high-risk women. Finally, as divergent relationships between premenopausal obesity and breast cancer have already been identified – depending on the patient's ethnicity –, public health intervention strategies should consider the characteristic of the population addressed.

5 FINAL CONSIDERATIONS

Studies that evaluated the relationship between obesity and premenopausal breast cancer indicate an inverse relationship between these two factors, that is, obese patients would have a lower risk of cancer; with the exception of Asian women, who are at increased risk. However, obesity, when present, confers a worse prognosis, increased risk of recurrence and mortality from breast cancer in premenopausal women, especially as it is related to more aggressive tumor subtypes.



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