Breast Cancer as a Late Complication of Treatment for Lymphoma in Children and Adolescents

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Abstract

The treatment for pediatric patients affected by Hodgkin's lymphoma, including chemotherapy and radiotherapy, has offered a high survival rate, but may be responsible for the appearing of breast cancer in later form in these same people. The 20-year survival rate can reach 90% of patients suffering from Hodgkin’s disease, but they may suffer sequelae, among which malignant secondary neoplasms, including breast cancer. Most studies show that the malignancy of breast tissue is the main secondary sequel to radiotherapeutics’ treatment for patients with Hodgkin’s lymphoma in childhood.

The Breast Cancer in adulthood may occur in patients treated in the past for Hodgkin's lymphoma, especially in women who have undergone radiotherapy in the area of mama. [1] The association between chemotherapy and radiotherapy for the treatment of Hodgkin's disease has harmful effects long term and should be rethought your indiscriminate use. [2] The breast cancer was observed in women patients at a medium range of 22 years after treatment for the first cancer in childhood and may vary from 14.3 to 32.1 years. [1] Other malignant diseases can also occur later after this same situation, such as thyroid Cancer, Skin Cancer not melanoma, leukemia or non-Hodgkin’s lymphoma; or non malignant problems as cardiotoxicity. [1, 2, 3, 4] As healing is achieved in many patients with the disease in childhood, the long-term effects and quality of life of survivors represent the biggest challenge in the post-treatment. [5]

Many patients who have had breast cancer later after Hodgkin’s lymphoma treatment in childhood were treated with radiotherapy with radiation field in the thoracic region and during puberty. [1, 2] The same study says that women found the new cancer, on aver-
age, 35.1 years old, revealing a latency of 20.7 years. [1] A third malignancies may occur in some patients. [6]

The risk of developing late breast cancer is higher 24 times than in the general population aged 25 to 45 years. [1] The cumulative risk of triggering late Breast cancer is 30% at 30 years after the radiotherapy. [5] Women give greater factor risk for the appearance of secondary malignancy treatment of Hodgkin's lymphoma with radiotherapy, especially the breast cancer. [1, 2, 6] Therefore, it's important that health plans offer screening tests for proper monitoring of these patients when healing is reached treatment of Hodgkin's lymphoma. [1]

So, it is necessary to justify the radiotherapeutic treatment indication in thoracic region, especially supradiaphragmatic. [1] It's important to inform the appropriate follow-up for children who were treated for Hodgkin's lymphoma of the risk of triggering other malignancies, among them the breast cancer. [2, 4, 5] in the 20 years after treatment in childhood, the survival rate of patients was more than 90%, but fell to 80% in the next 10 years, as a result of deaths from various causes, because the treatment of breast cancer secondary to radiotherapy is usually diagnosed in advanced stage. [1] With this, it becomes something believable that radiotherapy is diminished in dose or even avoid in these treatments if there is no absolute indication.

**Authors' contributions**

AM searched, analyzed and interpreted the data used for writing this comment. JA performed the bibliographic reference, translation, text formatting and recension. All authors read and approved the final manuscript.

**References**