

Lymphedema post-breast cancer surgery: A Populational study

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Abstract

Aim: The aim of this study was to evaluate lymphedema post-breast cancer surgery in a small town in Brazil. **Design:** Study census-type populational of the town of Palmares Paulista, Brazil in the period from September 2008 to May 2009. **Method:** The prevalence of lymphedema post-breast cancer surgery was evaluated in 1583 women. Home visits were made on Saturdays and Sundays by a physician, physiotherapists and an occupational therapist. In a single visit, female residents were questioned about surgical treatment of breast cancer, time of surgery, outbreaks of erysipelas and the presence of edema after the surgery. A diagnosis of edema was reached from the patients' personal feeling that the arm became swollen after treatment. **Results:** Of the 1583 women who participated in the study, 32 had been submitted to the surgical treatment of breast cancer with axillary dissection, with 12 (37.5%) reporting subsequent edema of the arm. Only one episode of erysipelas or cellulitis was reported. The time from surgery varied between 2 and 12 years with a mean of 7 years. **Conclusion:** Patients submitted to breast cancer surgery suffer a high rate of lymphedema but a low incidence of arm infections.

Key words: lymphedema, breast cancer, prevalence

Introduction

Arm morbidity post-breast cancer surgery is increasingly being recognized as a chronic problem for some women. Comprehensive behavioral management and rehabilitation programs are needed to treat arm morbidity following breast cancer surgery. These programs should address the full scope of symptoms and associated psychosocial and functional sequelae^{1,2}.

Mastectomy, extent of axillary dissection, radiation therapy, and presence of positive nodes increased risk of developing arm lymphedema, a frequent complication after breast cancer treatment³. Early diagnosis and treatment is considered important for successful management of breast cancer related arm lymphoedema⁴. Lymphedema after standard axillary lymph node dissection can occur in up to 50% of patients. Adjuvant radiotherapy to the breast or lymph nodes

increases the risk of lymphedema, which has been reported in 9% to 40% of these patients⁵. In the diagnosis of lymphedema, perimetry is one of the most commonly employed examinations, although volumetry is considered the gold standard^{6,7}.

Two of the complications of lymphedema are lymphangitis and erysipelas, both of which aggravate the clinical condition of patients⁶. As well as the physical changes in these patients, psychosocial aspects are involved which often lead to impairment of the quality of life⁸⁻¹¹. The aim of this study was to evaluate the prevalence of lymphedema post-breast cancer surgery in a small Brazilian town.

Method

The prevalence of lymphedema post-breast cancer surgery was evaluated in a census-type populational study of 1583 women of the town of Palmares Paulista, Brazil in the period from September 2008 to May 2009. Home visits were made on Saturdays and Sundays by a physician, physiotherapists and an occupational therapist. In a single visit, female residents were questioned about surgical treatment of breast cancer, time of surgery, outbreaks of erysipelas and the presence of edema after the surgery. A diagnosis of edema was reached from the patients' personal feeling that the arm became swollen after treatment. Diagnosis of erysipelas or cellulitis was made from reports of infection of the arm for which an antibiotic was required. The frequency of events was analyzed. This study was approved by the Research Ethics Committee of the Medicine School of São Jose do Rio Preto-FAMERP-Brazil (protocol # 417/2007).

Results

The ages of the participants ranged from 18 to 92 years old with a mean of 38.6, standard deviation of 15.3 and a median of 36.0 years old. Of the 1583 women who participated in the study, 32 had been submitted to breast cancer surgery with axillary dissection. Of these, 12 (37.5%) reported that they suffered from edema. Only one episode of erysipelas or cellulitis was reported. The time from the surgery to the interview varied from 2 to 12 years with a mean of 7 years.

Discussion

This census-type populational study showed that the prevalence after the surgical treatment for breast cancer is high in this small Brazilian town. The diagnostic gold standard for lymphedema is volumetry; other evaluation techniques can be employed although these can suffer from variations depending on the method utilized⁷. A study carried out about 20 km from the town of the current study evaluated lymphedema using volumetry and identified a prevalence of 32.5% of edema in patients submitted to breast cancer surgery, and thus the results of the two studies were similar⁸.

Clinical observations show that patients who use repetitive movements during their work complain of an aggravation of edema which improves with rest. These reports are common and suggest that occupational activities affect edema. One study confirmed the effect of physical activity in these patients.¹²

Infection is another warning sign after breast cancer surgery. However, only one patient in this study reported an infectious episode. A study that followed the evolution of patients with lymphedema post-breast cancer surgery detected a low incidence of infection suggesting that prophylactic antibiotic therapy is not necessary in this population of patients.⁶ Even so clinical observations have identified isolated cases of patients where prophylactic care is insufficient and prophylactic antibiotic therapy should be considered.

Conclusion

Patients who are submitted to breast cancer surgery present a high prevalence of lymphedema but a low incidence of infections of the arm.

Competing interests

The authors declare that they have no competing interests (political, personal, religious, ideological, academic, intellectual, commercial or any other) in relation to this manuscript.

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