Cohort study

Five to seven years after breast cancer treatment, over a third of women (37%) report persistent pain

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Implications for practice and research

- Early detection and improvements in treatment have resulted in significantly improved survival of breast cancer survivors. This study highlights the importance of persistent and late effects of cancer therapy on the lives of survivors and identified fluctuating pattern of symptoms over time.
- The findings of persistent pain and sensory disturbances at an average of 6 years following primary breast cancer therapy underscore the significance of long-term treatment effects.
- Younger age and axillary lymph node dissection were reported as risk factors for persistent pain. Patients with these risk factors should be targeted in clinical practice for assessment and early intervention.
- The study findings provide strong support for individualising cancer survivor care plans and the need for long-term follow-up.[1]

Context

This study addresses the need to increase our knowledge about the presence of cancer treatment-related symptoms in long-term breast cancer survivors. It specifically investigates the prevalence of pain symptoms associated with primary treatment, specifically surgery and radiotherapy. There is a robust body of evidence describing the symptom profile of breast cancer survivors up to 1 year following therapy, but there are limited data on long-term treatment effects.

Methods

This was a cross-sectional survey of a nationwide cohort of breast cancer survivors from Denmark. Eligible participants from a cohort of women diagnosed with breast cancer in 2005 were sent a questionnaire in 2008 (N=3754 with an 87% response rate). This study administered the same questionnaires in 2012 to the eligible participants from the responding participants in 2008 (N=2828 with a response rate of 89%). The primary outcome was the presence of pain in the breast, side of the body, axilla and arm of the operated side. Secondary outcomes were location, intensity and frequency of pain and prevalence of sensory disturbances.

Findings

At a mean follow-up time of 72.5 months, 37% of breast cancer survivors reported persistent pain with a range 22–53% depending on the type of treatment. Of note, 36% of participants who reported pain in 2008, no longer reported pain; in contrast, 15% of those who were pain free in 2008, now reported pain. Sensory disturbances were reported by 50% with the most common areas being within the breast (46%), axilla (67%) and arm (47%). Axillary lymph node dissection (OR 2.04, p<0.001) and younger age (OR 1.78, p<0.001) were identified as significant risk factors for persistent pain and sensory disturbances.

Commentary

A major limitation is the cross-sectional study design. Lack of presurgery factors, such as overweight/obesity, comorbid illness and pre-existing pain and post-treatment variables, such as postoperative infection, level functional recovery of the arm and degree of radiotherapy reactions, limit the interpretation of the findings. Many of these factors are known contributors to arm symptoms and complications after treatment. As participants reported a high prevalence of sensory changes in the breast, more detailed information on the differences in breast symptoms between those women who received mastectomy versus breast conservation with radiotherapy would have enhanced the clinical relevance. Information on the types of endocrine therapy would have been informative. The increasing use of aromatase inhibitors as adjuvant endocrine therapy versus the selective oestrogen receptor modulator, tamoxifen, has clinical significance due to the prevalence of musculoskeletal symptoms and pain reported by breast cancer survivors. And as the authors state, the chemotherapy regimens of the study cohort did not include taxane-based drugs, which are associated with peripheral neuropathy and pain, and there are no known data on whether this neurotoxicity influences the primary therapy pain outcomes. Finally, neoadjuvant therapy is becoming more common and it is unknown how side effects of chemotherapy prior to surgical and radiotherapy treatments impact patient outcomes.

Despite the cited limitations, the study further contributes to the body of evidence about the symptom profile in breast cancer survivors, which can significantly influence their functional ability and overall quality of life. Younger age is a known risk factor for poorer psychological adjustment, functioning and lower reported quality of life.[2–5]

Competing interests None.

References

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