

BEYOND THE SWELLING: EXPLORING NEUROPATHIC PAIN IN BREAST CANCER SURVIVORS WITH LYMPHEDEMA

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Background and Aims

Background: Lymphedema is a common and persistent complication among breast cancer survivors, often accompanied by varying types of pain, including nociceptive and neuropathic components. Pain mechanisms associated with lymphedema include tissue stretching due to swelling, inflammatory responses from lymphatic fluid stasis, nerve compression, and musculoskeletal strain resulting from altered biomechanics. Clinically, this pain may present as heaviness, tightness, burning, tingling, or pain related to complications such as cellulitis and fibrosis. **Objective:** This study aimed to assess the presence and characteristics of neuropathic pain in patients with breast cancer-related lymphedema (BCRL) using validated instruments such as the PainDETECT questionnaire and conventional pain assessment tools.

Methods

Methods: Lymphedema was identified using limb circumference measurements, with a relative volume change (RVC) of $\geq 5\%$ considered diagnostic. Pain was evaluated through the PainDETECT questionnaire and a direct inquiry regarding pain presence. Additional symptoms including numbness, tingling, and muscle weakness, were analysed to distinguish neuropathic features from general pain intensity. Sociodemographic and disease-related data were collected via structured questionnaires and medical records review.

Results

Results: Among a total of 87 breast cancer survivors with a mean age of approximately 58 years (58.47 ± 8.95) and a mean body mass index (BMI) of 27 (27.74 ± 5.64), 58% self-reported swelling, while 39% reported no swelling. Based on relative volume change (RVC), 40 participants (45.98%) had $RVC < 5\%$, and 47 participants (54.02%) had $RVC \geq 5\%$. Participants with higher volume changes demonstrated significantly more advanced disease stages according to the International Society of Lymphology (ISL) staging classification ($p < 0.001$).

Conclusion

Conclusion: Early identification of neuropathic pain in BCRL may support more personalized and effective pain management strategies, contributing to improved long-term outcomes and quality of life for breast cancer survivors.

Keywords: Keywords., Breast, neoplasm, Lymphedema, Neuropathic