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Impact of Physiotherapy Interventions on Post-Mastectomy Lymphoedema: A Systematic Review

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ABSTRACT

Introduction: Post-mastectomy Lymphoedema (PML) is a chronic condition caused by lymphatic disruption from mastectomy, lymph node dissection, or radiotherapy, leading to limb swelling, pain, and reduced range of motion. It affects up to 60% of patients a year post-surgery. With 2.3 million new breast cancer cases in 2020, effective PML management is essential. Physiotherapy interventions show promise, but their comparative effectiveness needs further investigation.

Aim: To assess the effectiveness of physiotherapy interventions in reducing lymphodema, alleviating symptoms, and improving quality of life for PML patients.

Materials and Methods: The review includes peer-reviewed articles from 2000 to 2024, focussing on Randomised Controlled Trials (RCTs) and pilot studies evaluating physiotherapy interventions. The review excludes non-physiotherapy interventions (pharmacological or surgical treatments), studies with insufficient data, and non-English publications or those not focused on PML. A systematic search of PubMed and Google Scholar using keywords like "post-mastectomy lymphoedema" and "physiotherapy interventions" extracted data on population, interventions, outcomes, and follow-up. Screening followed PRISMA guidelines, with quality and bias assessed using the PEDro scale and Cochrane risk-of-bias tool.

Results: The systematic review evaluates physiotherapy interventions for PML, finding Low-Level Laser Therapy (LLLT) and acupuncture as most effective for reducing limb volume and pain, while Shockwave Therapy (SWT) improves tissue elasticity. Education supports prevention and adherence. Personalized multidisciplinary care is recommended for optimal outcomes.

Conclusion: Physiotherapy techniques like LLLT, SWT, MFR, acupuncture, and education improve post-mastectomy lymphoedema management by reducing symptoms and enhancing quality of life. Personalised, multidisciplinary approaches, consistent protocols, and further research are essential to optimise long-term outcomes for breast cancer survivors.

Keywords: Breast cancer, Lymph node dissection, Radiotherapy

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