E-Poster

EP-896

Optimal Regimen of Low-Level Laser Therapy for Breast Cancer-Related Lymphedema: Clinical Guidelines Based on Existing Evidence

Topic: Physical Modalities

Shao Tang Chiu

Physical Medicine and Rehabilitation, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung City, Taiwan ROC

BACKGROUND

Breast cancer-related lymphedema (BCRL) is a common complication of patients who have completed cancer treatment. The overall incidence is approximately 20%. Lymphedema affects not only extremity function but also psychological status. The current standard treatment is complete decongestive therapy (CDT), encompassing four main components: manual lymphatic drainage (MLD), compression bandaging, exercise, and skin care. Low-level laser therapy (LLLT) is an alternative treatment for BCRL. Although LLLT has been explored as a treatment option for BCRL, there is no consensus for an optimal regimen of parameters. This study aims to integrate current evidence and provide clinical recommendations for optimizing LLLT parameters to improve BCRL management.

METHODS

Relevant studies were collected from online database. The study type was defined as a randomized controlled trials (RCTs) that compared LLLT with sham laser or other conventional therapies, as well as systematic reviews and case reports. Treatment parameters were categorized based on treatment sites, treatment regimens, and total treatment sessions. Clinical outcomes were evaluated through swelling reduction, grip strength, pain relief, and quality of life (QoL). The assessment time points were defined as post-treatment and follow-up periods.

RESULTS

In this review, LLLT targeting at the axillary site resulted in significant improvements in post-treatment QoL. Treatment frequency of three sessions per week with a laser density of 1.5-2 J/cm² was associated with better outcomes of swelling reduction in both immediately post-treatment and at 1-3 months follow-ups. Furthermore, treatment times consisting of more than 15 sessions showed promising results in reducing swelling and improving grip strength.

CONCLUSION

Review in this study found an optimal effectiveness in targeting axillary area, three sessions per week treatment frequency, 1.5-2 J/cm² laser density, and extended treatment course. These recommendations provide a practical guide for physiatrists incorporating LLLT into clinical applications. Further rigorous, large-scale studies are needed to refine these clinical guidelines.

Statement of Disclosures

None

Doi: 10.5606/archisprm.2026.EP-896

Corresponding Author:
Shao Tang Chiu
Physical Medicine and Rehabilitation, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung City, Taiwan ROC
Email: sweetsugar7969315790@gmail.com