



Comments to “The Randomized Controlled Study of Low-Level Laser Therapy, Kinesio-Taping and Manual Lymphatic Drainage in Patients With Stage II Breast Cancer-Related Lymphedema”

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We read with great interest the article published by Selcuk Yilmaz and Ayhan (1). The authors focused on a topic of utmost importance in clinical practice related to the most common and debilitating side effect of breast cancer treatment.

Currently, the gold standard approach to lymphedema patients is decongestive physical therapy, which includes manual lymphatic drainage (MLD), compressive therapy, skin care and exercises. However, other forms of adjuvant treatment have been increasingly highlighted, aiming for better therapeutic results and lower treatment related costs (2).

For that matter, the randomized clinical study performed by Selcuk Yilmaz and Ayhan (1) compared efficacy and tolerability of kinesio-taping (KT) or low-level laser therapy (LLLT) as alternatives to MLD in breast cancer survivors who developed unilateral stage II lymphedema, meaning their excess volume on the affected arm reached 5 to 20%. Patients were randomized in three groups and treated with MLD, KT or LLLT. Treatment was undertaken for three weeks, five sessions a week, and all women were oriented about self-massaging techniques, skin care and exercises. At the end of each session, the therapist applied multilayer bandaging in all groups, which was kept for 23–24 hours and supervised remedial exercises performed by the patients. After the end of the three treatment weeks, flat-knitted garments were prescribed to all patients to be worn during the maintenance phase. Outcomes were assessed immediately after treatment and up to 12 weeks of follow-up. Based on their results, the authors concluded that KT was more effective in volume reduction than MLD and that KT was as effective as LLLT.

However, we believe that some critical issues should be considered regarding their conclusions:

- Despite randomization, the MLD group presented a significant predominance of obese patients, a longer duration of swelling in months, and lesser caregiver support. Those factors are known to be related to transcription factor decoy (TFD) response (3-5). In the results published in the article, the authors did not control the influence of those variables in the statistical analysis (models of adjusted multiple regression). Therefore, the favorable outcome observed in the KT group may be due to the diverse clinical and demographic characteristics among groups and not to the intervention itself.
- Fan-cut kinesio-tape was applied using the lymphedema kinesiotaping technique of paper-off tension. The supporters of this technique argue that its beneficial effect lies in the fact that lifting the skin induces opening of initial lymph vessels and enhances fluid absorption and transport (6). In this study, patients in the KT group also had multilayer bandaging, causing this supposed skin lifting effect to be replaced by the well-established compressive effect. Therefore, edema reduction may be attributed not to the lymphatic effect of the taping, but to the overlapping compression provided by bandaging.
- LLLT was applied in the axillary and cubital areas. This technique intends to stimulate lymphatic motricity and promote lymphangiogenesis. However, these effects of LLLT are not expected to be observed in so short a follow-up (7).

In conclusion, we believe that the results obtained by Selcuk Yilmaz and Ayhan (1) emphasize the role of multilayer bandaging associated to exercises and skin care as the best therapeutic approach to breast cancer treatment related lymphedema. So, even if adjuvant therapies may be incorporated to selected patients, namely MLD alone, LLLT, KT, and others, they still need further evaluation for they do not offer better outcomes as compared to TFD.

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