Myofascial versus conventional physiotherapy in post-mastectomy patients: a randomized controlled trial

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Mastectomy can be debilitating due to the effects of radical surgery on the musculoskeletal system. Improved therapeutic approaches that include scar tissue are needed.

Objective: To compare manual myofascial therapy to conventional physiotherapy to improve the functional status of post-mastectomy patients.

Methods
A total of 61 patients who underwent total mastectomy for breast cancer with shoulder and/or upper torso functional impairment were enrolled in this trial, with 56 randomized to treatment; of these, 48 met all study protocol requirements, and underwent a final assessment.

Patients were received either four weeks of conventional physiotherapy consisting of exercise and massage (n=21) or myofascial therapy (n=27). The following variables were assessed: muscle length; pain intensity, ROM (range of motion) and scar mobility which were made by the centimeter measure as difference of distance from the bone point, to the most limited place in the scar.

This study was approved by the Institutional Review Board #42/13 at The Poznan University of Medical Sciences, in Poznan, Poland.

Results
Myofascial therapy was superior to conventional physiotherapy in reducing the percentage of patients with shorter-than-normal muscle length at several sites. In the treatment group, significant decreases from baseline were observed for the pars clavicularis (67% with shortened muscles at baseline vs. 22% post-treatment; p=0.002), descending trapezius (81% vs. 26% p< .001), pars sternocostalis (37% to 7%; p=.02), latissimus dorsi (52% to 15%; p=.008), and levator scapulae muscle (41% to 7%; p=.009).

Before treatment there are no difference between groups in scar mobility (pre treatment p=.809 measured in relation to xiphoid process and p=.829 to coracoid. After treatment there are significantly improved mobility in the scar area between groups CG and TG, with increases relative to the xiphoid process (p=.02) and to the coracoid (p =.001).

Conclusion
The findings presented here show that myofascial interventions can significantly improve certain muscle elasticity, and ROM in the upper limb girdle musculature. In the treatment group, scar therapy could be important factor in restoring normal tissue and joint mobility and in reducing pain. These findings suggest that manual myofascial therapy is superior to conventional physiotherapy in post-mastectomy patients.