

[Effectiveness of Microcurrent Therapy as a Constituent of Post-Hospital Rehabilitative Treatment in Patients After Total Knee Alloarthroplasty – A Randomized Clinical Trial]

[Article in German]

G Rockstroh, W Schleicher, F Krummenauer

PMID: 20533147 DOI: [10.1055/s-0029-1246152](https://doi.org/10.1055/s-0029-1246152)

Abstract

Purpose: This trial compared the clinical effectiveness of a combination of microcurrent therapy (M) with conventional postoperative physiotherapy treatment versus the combination of the latter with a sham (S) treatment after total knee arthroplasty (TKA) in terms of patient-related functional outcome parameters.

Methods: A total of 78 inpatients after TKA was randomized into the active versus the sham treatment samples; all patients received ten applications of their respective therapy assignment. The primary clinical endpoint of the investigation was defined as the three-months intraindividual change (%) in a patient's OSWESTRY total function score after start of treatment. Secondary endpoints were the WOMAC osteoarthritis index as well as a patient's pain profile as assessed by a visual analogue scale before start of treatment, after five and ten therapeutic applications, and three months after discharge from hospital.

Results: The M sample showed a median increase of 31% (22–38%) in the OSWESTRY total score from 53% before start of treatment to 91% three months afterwards; the control sample showed an increase of 18% (3–31%) in median from 56 % to 78%; the samples differed significantly in this three-months increase ($p < 0,001$) but not in the baseline OSWESTRY score before start of treatment ($p = 0,841$).

Conclusion: This randomized trial could demonstrate statistically significant superiority of microcurrent therapy embedded in conventional postoperative rehabilitation treatment after TKA versus the combination with a sham treatment. The results indicate an early introduction of microcurrent therapy concepts into postoperative treatment.