Plantar Neuro-Receptor Activation In Improving Overall Clinical Function And Decreasing Pain And Stiffness In Tka: Rctstudy

Info:

COA/CORS/CORA Submission Topic:
CORS Arthroplasty

Purpose:

Despite total knee arthroplasty demonstrating high levels of success, 20% of patients report dissatisfaction with their result.

Wellness Stasis Socks are embedded with a proprietary pattern of neuro-receptor activation points that have been proven to activate a precise neuro-response, as according to the pattern theory of haptic perception, which stimulates improvements in pain and function.

Technologies that manipulate this sensory environment, such as textured insoles, have proven to be effective in improving gait patterns in patients with knee osteoarthritis. In regard to patients undergoing TKA using this new technology may prove beneficial as an adjunct to recovery as many patients suffer from further deficits to their proprioceptive system caused by ligamentous damage and alterations to mechanoreceptors during procedure.We hypothesized that the Wellness Stasis Socks are a safe, cost-effective and easily scalable strategy to support TKA patients through their recovery.

Method:

Double-blinded, placebo-controlled randomized trial. Randomization using a computer-generated program . All study coordinators, healthcare personel and patients were blinded to patient groups. All surgical procedures were conducted by the same technique and orthopaedic surgeon. Intervention group: Wellness Stasis socks containing receptor point-activation technology. Control group: indentical appearing Wellness Stasis socks without receptor point-activation technology. Sock use during the waking hours . All additional post-operative protocols remained consistent between groups including same facility physiotherapy . Additional modalities (ice machines, soft-tissue massages, acupuncture) were prohibited. WOMAC questionnaire completed at baseline, 2 weeks, and 6 weeks to assess pain, stiffness and physical function. G* Power software to determine minimum sample of 50 in each group. No patients were lost to follow up and all followed study protocol. Data analysis using SPSS software. P-values, effect sizes, and confidence intervals are reported to assess clinical relevance of the finding. Physical status classifications were compared using t-test. Within-subject and between-subject differences in the mean WOMAC were analyzed by ANOVA.

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Results:

Cramer's V statistical analysis noted that other variables of Sex, BMI, ASA classification and Age were not statistically different between the control and intervention groups.

No statistical difference between groups in Preop Womac scores.

The data showed a consistent improvement in Womac scores for pain and stiffness at 2 weeks post op in the interventional group over the control group.

The womac scores assessing physical function showed a consistent improvement at both 2 and 6 weeks post op in the intervention group compared to the control group.

There were no complications in either group associated the sock use.

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Conclusion:

The intervention proved to be a low cost and safe additional intervention post operatively from TKA to help patients improve with regard to pain, stiffness and physical function.

This study suggests this modality can be added to the list of other commonly used post op interventions such as cryocuffs, physiotherapy, and relaxation techniques as safe post op interventions to help patients improve post op TKA and can act as an adjunct in providing non narcotic pain control.

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