iNCREDIWEAR®

Combined Rehab Protocol Reduces OA Knee Pain and Improves Outcomes

Background

Clinical OA is believed to be highly prevalent today because of recent increases in life expectancy and body mass index and remains the most challenging arthritic disorder, with an estimated 32.5 million US adults diagnosed with clinical OA as well as a high burden of disease and no available disease-modifying treatment. Current treatments are limited by small effect sizes and adverse side effects. A multidisciplinary and sustained international effort involving all major stakeholders is needed.

The Limfa machine sends a dedicated pattern of ultra-weak complex electromagnetic sequences and has been shown to promote cartilage regeneration and reduce fracture healing time.

In this study, extremely low frequency (ELF) electromagnetic field therapy was combined with the Incrediwear non-compressive, soft knee brace in a comparative protocol to determine the effect of ELF alone and in combination with Incrediwear on pain and function for Knee OA.

Methods

35 patients were assigned to either Group 1: Limfa therapy or Group 2: Limfa therapy and Incrediwear knee sleeve. All patients participated in ten sessions of Limfa therapy with antiphlogistic and antiedema programs for 2 weeks, 5 days/week, followed by, without interruption, twelve sessions of bone and connective tissue repair programs for 4 weeks, 3 days/week. Patients in Group 2 wore the Incrediwear knee sleeve during rest and daily activity for at least 6-8 hr a day, every day, for 6 consecutive weeks.

VAS, KOOS and Lysholm scores were collected at baseline (T=0), after 2 weeks of treatment (T=1), after 4 weeks of treatment ((T=2), and 6 weeks following completion of all treatment sessions (T=3). 22 patients per group were included, based on power calculations of 90% power, alpha of 0.05, difference of 2 cm (VAS) and standard deviation of 1.5 factoring in a 20% dropout rate.

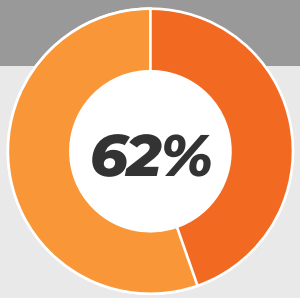
Combined Rehabilitation Protocol in the Treatment of Osteoarthritis of the Knee: Comparative Study of Extremely Low-Frequency Magnetic Fields and Soft Elastic Knee Brace Effect
Healthcare (Basel), April 2023

Limfa Treatment Device

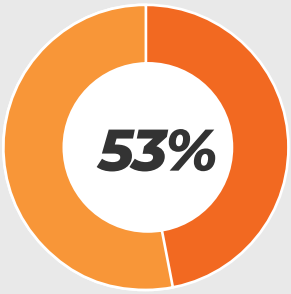
Incrediwear non-compressive germanium embedded knee brace

Results:

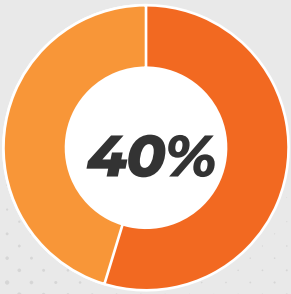
- The results showed that pain at rest, pain in motion, KOOS, and Lysholm Scores were significantly affected by ELF over time.
- Group 2 had a better response in terms of pain resolution at rest ($p < 0.05$) and a concurrent better response at the post-treatment follow up in terms of functional recovery ($p < 0.05$).
- Group 2 (Limfa and Incrediwear) showed 62% reduction in pain 6 weeks after completing all treatments and a 53% reduction in pain after just 2 weeks of treatment.
- Group 2 showed a 40% improvement in Lysholm Score and 29% improvement in KOOS 6 weeks after completing all treatments, and a 39% improvement in Lysholm after just 2 weeks of treatment.
- The combination of ELF and the Incrediwear non-compressive knee sleeve significantly reduced pain and improved outcomes for pain and function in patients with acute Knee OA



Reduction in pain 6 weeks after completing treatment



Reduction in pain after just 2 weeks of treatment



Improvement in Lysholm Score after 6 weeks

Authors

Paolucci T, Porto D, Pellegrino R, Sina O, Fero A, D'Astolfo S, Franceschelli S, Patruno A, Fusco A, Pesce M.