

CHELT therapy in the treatment of chronic insertional Achillestendinopathy.

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The application of laser therapy on soft tissue is used for pain relief, anti-inflammation action and biostimulation. The efficiency of High Energy Laser Therapy has not yet been studied on Achillestendinopathy. The aim of the study is to evaluate the effectiveness of a flow of Cold air and High Energy Laser Therapy (CHELT) versus Extracorporeal Shock Waves Therapy (ESWT) in the treatment of Achillestendinopathy. In this prospective, clinical trial, 60 subjects affected by insertional Achilles tendinopathy were enrolled and randomized to CHELT (30 subjects) or to ESWT (30 subjects). In CHELT group the patients received ten daily sessions of 1,200 J and 12 W of laser therapy (wavelength of 1,084, 810 and 980 nm) added to a flow of cold air at -30 degrees C. In the ESWT group, the patients received three sessions at 3- to 4-day intervals of 1,600 impulses with an energy flux density (EFD) of 0.05-0.07mJ/mm². Both groups of participants performed stretching and eccentric exercises over a 2-month period. The visual analogue scale (VAS), the Ankle-Hindfoot Scale, and the Roles and Maudsley Score were measured before treatment (T0), and at end of the treatment session (T1) and 2 (T2) and 6 months (T3) after treatment during the follow-up examinations. In both groups, we found a statistically significant improvement of the VAS at T1, T2 and T3 ($p < 0.01$). The difference between the two groups was statistically significant in favour of the CHELT group ($p < 0.001$). At 2 months, the CHELT group was statistically better for Ankle-Hindfoot Scale and the Roles and Maudsley Score ($p < 0.05$)

and at 6 months only for the Roles and Maudsley Score ($p < 0.001$). High Energy Laser Therapy gave quicker and better pain relief. It also gave the patient a full functional recovery and greater satisfaction.

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