

Combination of physical strength training and local corticosteroid injection is superior to each of these separately in treatment of plantar fasciitis: A randomized controlled trial.

80.

Finn Johannsen, Robert Herzog, Peter Magnusson, Michael Kjær

Institute of sportsmedicine Copenhagen, Ortopæd kirurgisk afdeling, Bispebjerg Hospital; fysioterapien, Bispebjerg Hospital; Institute of sportsmedicine Copenhagen, Ortopæd kirurgisk afdeling, Bispebjerg Hospital

Background: The plantar fascia is a flat tendon like structure under the foot, that is frequently overloaded resulting in plantar fasciitis (PF). The lifetime incidence is estimated to 10%.

Purpose / Aim of Study: Corticosteroid injections has shown good short-term effect on PF, but a deleterious effect in the long-term. Strength training however has a good long term effect. We hypothesized that combined strength training and corticosteroid injections would result in superior effect both in the short term and long term.

Materials and Methods: Ninety consecutive patients (20–65 years) with PF symptoms for at least 3 months, with ultrasound measured thickness above 4.0 mm, were elected and randomized into 3 groups: a) 3 month controlled Strength Training (ST), b) monthly corticosteroid injection, maximum 3 injections (Inj). c) combination of a) and b) (ST-Inj). Primary outcome was predefined as change from baseline until 6 months in pain during function on a 100 mm VAS score and Foot Function Index (FFI, range 0–230).

Findings / Results: All 3 groups improved significantly over time. At primary endpoint (6 months) the mean difference between the combined treatment and training only was 39.7 in FFI (95% confidence interval (CI): 62.8 to 16.4) and 20.0 for VAS pain during function (CI: 35.0 to 4.9). The mean difference between the combined treatment and corticosteroid injections only was 29.4 in FFI (CI: 52.1 to 6.6) and 16.8 for VAS pain during function (CI:31.6 to 2.0). All differences were not only highly significant but also clinical relevant, The combined treatment was superior at all timepoints: 3,6,12,24 months.

Conclusions: This is the first study to show a good short and long-term effect of corticosteroid injections in plantar fasciitis if combined with strength training. This treatment regime might be applicable to other tendinopathies in the body.