Alfredson H, Harstad H, Haugen S, Ohberg L.

Sclerosing polidocanol injections to treat chronic painful shoulder impingement syndrome-results of a two-centre collaborative pilot study.

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The histological changes found in the supraspinatus tendon have similarities with the findings in Achilles-, patellar- and extensor carpi radialis brevis (ECRB)-tendinopathy. In recent studies, we have found a vasculo-neural ingrowth in chronic painful Achilles and patellar tendinopathy, and demonstrated good short-term clinical effects with injections of the sclerosing substance polidocanol. In this collaborative two-centre pilot study, 15 patients (10 males and 5 females, mean age 46 years) with a long duration of shoulder pain (mean 28 months), and given the diagnosis chronic painful shoulder impingement syndrome, were included. They had tried rest, traditional rehabilitation exercises and multiple subacromial corticosteroid injections, without effect. We found vascularity (neovessels) in chronic painful, but not in pain-free, supraspinatus tendons, and prospectively studied the clinical effects of ultrasound (US) and colour Doppler (CD)-guided injections of polidocanol, targeting the area with neovessels. The patients evaluated the amount of shoulder pain during horizontal shoulder activity on a visual analogue scale (VAS), and satisfaction with treatment. Two (median) (range 1-5) polidocanol treatments (with 4-8 weeks in between) were given. In four patients (considered treatment failure), cortisone was injected into an inflamed subacromial bursa at one separate occasion weeks after the last polidocanol injection. At follow-up, 8 (median) (range 4-17)

months after the treatment, 14 patients were satisfied with the result. Using the visual analogue scale evaluation (VAS), the pain dropped from 79 before treatment to 21 at follow-up ($P < 0.05$). In the short-term perspective, sclerosing polidocanol injections targeting the neovessels in the supraspinatus tendon and/or bursa wall seems to have a potential to reduce the pain during shoulder loading activity.