

Results of the combined treatment with radial and focussed shockwaves in patients with chronic cervical pain

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Introduction:

Radial shockwaves have already received acknowledgement in the treatment of myofascial pain. Recently the focussed shockwaves that have been used for the treatment of tendons have been increasingly used in the treatment of muscular trigger points. By being able to regularly provoke the characteristic referred pain of muscular trigger points with focused shockwaves one can presume this treatment will have more advantages.

Methods:

To evaluate the efficiency of the different shockwaves, a prospective randomized study was executed on 150 patients with chronic cervical pain (> 6 months, VAS > 6) during an observation interval of 3 months. Three comparable groups of 50 patients each were treated 6 times with shockwaves: Group 1 (RSW) was treated with the radial shockwaves (8000 impulses/session, 1.8-3.5 bar). Group 2 (FSW-RSW) received a combined treatment starting with focussed shockwaves (1200 impulses/session, 0.05-0.35 mJ/mm²) and then continuing during the same session with radial shockwaves (4000 impulses). Group 3 (FSW) was treated only with focused shockwaves (2100 impulses/session). As clinical parameters we measured the mobility of the cervical spine (CROM) and the pain level (VAS) before and after the treatment and 3 months later.

Results:

Group 1 (RSW) achieved an increase of +20° in rotation, +17° in ante-retro flexion and +16° in lateroflexion after treatment and 3 months later. The pain level was reduced from VAS 7.2 to 2.1. Group 2 (FSW-RSW) showed a slightly larger increase in mobility than group 1 (but was not statistically significant). The reduction of pain was the greatest (VAS 1.7, p<0.05) and appeared earlier than in the other 2 groups. Group 3 (FSW) gained less mobility (+13° in rotation, + 10° in ante-retro flexion, + 11° in latero flexion, p<0.05) but achieved the same pain reduction as group 1.

Discussion:

The combined treatment of focused and radial shockwaves (group 2) achieved better results than the monotherapies in groups 1 and 3. The big advantage of this combined treatment seems to be the amount and speed of pain reduction. The smaller gain in mobility after treatment with only focused shockwaves could be explained by the fact that the treatment area of focused shockwaves is too limited and that the flexibility of muscles can also be increased by treating painless muscle areas as we do with unfocused radial shockwaves.

Conclusion:

Myofascial pain syndromes should be treated with the combination of focused and radial shockwaves.