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Presentation

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

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Introduction:

The radial shockwaves have already received acknowledgement in the treatment of myofascial pain. Presently the focused shockwave that was known from the treatment of tendons is now used more and more in the treatment of muscular trigger points. By being able to regularly provoke the characteristic referred pain of muscular trigger points with the focused shockwave one can presume that this treatment will have more advantages.

Material and method:

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. 3 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 the focused shockwaves (1200 impulses/session, 0.05-0.35 mJ/mm<sup>2</sup>) and then continuing during the same session with the radial shockwaves (4000 impulses). Group 3 (FSW) was only treated with the focused shockwave (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<005) 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.

Conclusion:

The combined treatment of the focused and the radial shockwaves (group 2) achieves better results as the monotherapies in group 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 the focused shockwaves alone could be explained by the fact, that the treatment area of this precise shockwave is too limited and that the flexibility of muscles can also be increased by treating painless muscle areas, as has been done using the imprecise radial shockwave.