Extracorporeal Shockwave Therapy in Calcific Tendinosis of the Rotator Cuff: Comparision of Radial and Focal Treatment
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Device and producing company: ORTHOGOLD 100, MTS; BTL 5000, BTL 6000
Introduction: Calcific tendinosis of the shoulder is often associated with chronic pain and impairment of function. Extracorporeal shockwave therapy (ESWT) is considered to be a treatment option. We compared the effects of two different ESWT technologies: focal and radial.

Methods: Forty eight shoulders were followed in 2 groups of twenty-four each. The treatment was weekly consisted of 3 x 2000 focal electrohidraulic shockwave with an energy flux density of 0.14-0.2 mJ/mm2 without anesthesia (group A) and 5 x 6000 impulses of radial impulses with progressive protocol (group B). The patients were examined at a 4 weeks, 3 and 6 months after treatment. X-rays were performed at each visit.

Results: In six months of folllowing after treatment the Constant Score improved from 52.5 to 78.4 in group A and from 54.2 to 72.6 in group B (p < 0.05). The values on the visual analog scale which ranges from 0 (no pain) to 10 (maximal pain) improved from 7.7 to 3.1 (group A) and from 7.4 to 3.3 (group B) before and 6 months after treatment respectively. X-rays showed a complete or subtotal calcific resorption in 56% in group A, and 38% in group B of patients.

Discussion: This is a preliminary study indicates that three sessions of extracorporeal electrohidraulic focal shockwave therapy with energy flux density of 0.14-0.2 mJ/mm2 may be as effective as five applications of a radial extracorporeal shockwave therapy with progressive protocol for calcific tendinosis of rotator cuff. Focal technology shortens the treatment time, but the radial treatment is more accessible to people.

Conclusion: Both technologies of ESWT (focal and radial) had successful and comparable result in the treated patients with calcific tendinosis of rotator cuff of the shoulder. No complications seen in six months of following. Subjectively, 84% of group A and 76% of group B judged the treatment to be successful.