

# **Treatment of patients with posttraumatic cartilage lesions in lower extremities with intermittent extracorporeal shockwaves and intra-articular application of hyaluronic acid**

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Starting in October 2003 patients with posttraumatic cartilage lesions of varying severity have been treated with intra-articular injection of hyaluronic acid and intermittent extracorporeal shockwaves at the surgery ward of the hospital at Wissembourg, France.

The period of discomfort of patients treated so far ranged from one to five years. In addition to the clinical examination at the beginning of the treatment, subjectiv registrations of complaints using VAS (visual analogue scale) and of mobile functions using the Lysholm score and HSS (hospital of special surgery) score were carried out.

The status of an admitted patient objectively registered through MRT examination with a standard procedure of cartilage description of medium size and larger joints in sagital and coronal cross-section.

T1-assessed spin-echo pulse sequence (SE)

T2-assesses turbospin-echo pulse sequence with fat suppression (TSE)

T1-assesses fat-suppressed gradient echo sequence (GE) with 3D-data acqusition (cartilage sequence).

The intra-articular hyaluronic acid injection was done five times at weekly interwals with a native molecular hyaluronic acid drug (e.g.Hyalubrix). The subsequent intermittent shockwave treatments were carried out at 2-finger distance focused on the center of cartilage lesion.

Length of treatment: 2000 impulses with 400 impulses each per location of treatment, pressure maximum 20 - 40 MPa, frequency 1-2 Hz.

Clinic control examinations with VAS, Lysholm- and HSS-score six weeks and subsequently 3,6 and 12 month after the beginning of treatment.

Results of MRI - controls after 3,6 and 12 month will be reported in due course.