

# Extracorporeal Shockwave Therapy for Adult Osteochondritis Dissecans of the Femoral Condyle

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Since extracorporeal shockwave therapy started to conquer the orthopaedics it determined new indications to be treated.

Aim of this report is to show the effect of ESWT on the adult Osteochondritis Dissecans of the femoral condyle.

As seen in earlier studies the shockwave application shows effect on bone-growth, on vascularization and on the cartilage tissue.

The mechanism of effectiveness is still under research but changes that take place in the body are described. High energy shock waves show a neosynthesis of bone, neovascularization and micro fractures that are induced by effects like cavitation, enhancement of higher production of TGF- $\beta$ 1, VEGF, NOS and other factors. The Osteochondritis dissecans should therefore profit from these effects.

The study was performed with the Ossatron by HMT on a number of 71 patients. The patients included have suffered from Osteochondritis Dissecans Stadium I and II in MRI. All wanted to get a therapy except for surgery which was in their eyes, the last possibility. The patients were scored by a subjective score, a Visual Analogue Scale, the Larson- Score and the Brückl- Score.

Further the patients received MRI- examinations to show the development of the affected area. It will still be shown to be the best course of treatment as the number of shocks and intensity of energy-flux-density to get the best results in revitalization of the osteochondral damage for this study was only performed in a prefixed schedule. The results of this study will be revealed in the lecture.

As extracorporeal shockwave therapy seems to be a treatment with minimal side effects, it is understandable that we look out for new indications to be treated with shockwaves.

The Osteochondritis Dissecans is only to be treated effectively by surgical intervention and the results presented in publications are not encouraging for patients and doctors as the disease will lead to an osteoarthritis of the joint. The conservative treatment is based on the hope for a spontaneous healing supported by the reduction of physical strain for long period.

The extracorporeal shockwave therapy therefore might be a casual therapy for an still unsolved indication and further investigations on the mechanism of effectiveness will lead us to better statements to indications that will gain from this method. In our experience we later have case reports about the effectiveness of the shockwave therapy even in states of the Osteochondritis so as state three. This may lead us to the possibility of treating osteoarthritis successfully by shockwaves. We even found very good results in the treatment of acute posttraumatic osteochondral lesions (controlled by arthroscopy).