

Clinical Efficacy of Extracorporeal Shock-wave Therapy in Knee Osteoarthritis

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Introduction:

A variety of non-operative treatments for osteoarthritis have been receiving considerable attention. The purpose of this study is to investigate the efficacy of extracorporeal shock-wave therapy (ESWT) in knee osteoarthritis preliminarily.

Methods:

ESWT were applied using Epos (Dornier Co., Germany) in 15 knees of 12 patients who had had an inadequate response to prior conventional conservative treatments for more than 6 months. The mean follow-up period was 22.2 (± 20.6 SD) weeks. We investigated the clinical efficacy of ESWT according to pain, function, X-ray and MRI findings. We used Japan Orthopaedics Association osteoarthritis score (JOA score) and the Visual Analog Scale score (VAS score) for the clinical evaluation of knee osteoarthritis.

Results:

Subjective symptoms improved in 11 of 15 knees (73.3%), and total score of JOA increased from 66.7 points to 84.7 during follow up. Particularly, pain score significantly reduced. The analgesic effect of ESWT was observed from immediately after treatment and "night pain", "pain on walking" and "tenderness" reduced but tenderness was likely to remain finally. There was no deterioration of symptom and we didn't detect any complication by radiographic analysis.

Discussion:

The efficacy of ESWT in enthesopathy such as tennis elbow or plantar fasciitis already has been known, while there was no report on the efficacy of ESWT in knee osteoarthritis. There are many reasons for pain in knee osteoarthritis, but a pain related from the tendon and ligament insertion of the knee seemed to be relieved with shock waves. This is the first report, which shows the clinical efficacy of ESWT in knee osteoarthritis.

Conclusion:

ESWT could be an alternative therapy in the treatment of knee osteoarthritis refractory to other therapies.