

Use of Shock Waves in Osgood-Schlatter Disease

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Device and producing company:

Evotron, HMT Italy

Introduction:

Osgood-Schlatter disease often is encountered in young athletes. The etiology is unknown, but it is thought to be secondary to repetitive microtrauma. Patients often have anterior knee pain, exacerbated with sporting activities. Radiographs may reveal fragmentation and irregular ossification at the tibial tubercle. Based on our experience, we optimized the shock wave rehabilitation treatment protocol using the HMT Evotron electro-hydraulic device.

Methods:

A total of 48 young athletes (age 10 ± 15 years) were treated with six sessions of shock waves at low frequency. Subjects did not accept the traditional protocol of cessation of sporting activities. In all subjects we reported maximum pain intensity [VAS] on both the clinical and functional scale after each session of shock wave treatment. At the beginning and end of treatment, telethermography and point-thresholds [PaTh] subsequent to pressure with Fischer algometer (value from 0 to 20, 5kg/cm²) were recorded. Inclusion criteria was duration of anterior knee pain, VAS of more than 8 to load, functional limitation, and signed informed consent document.

Results:

Clinical examination and clinical functional scale show the functional recovery. The framework static and dynamic thermography showed a trend towards normalization of the painful areas. At the end of all treatments VAS decreased (8.5 to $2,2 \pm 0.6, p$).

Discussion: After the first month of therapy, patients could resume practice of sporting activities and they have suitability for the agonistic activity at the end of treatment. Recurrence in 6.85% of cases did not cause interruption of resumption of sports.

Conclusion: The shock wave treatment protocol allowed us to achieve good results especially in sports athletes, without them having to refrain from competitive activities. Additional benefits included the absence of contraindications and the non-invasive nature of the treatment.