

Achilles Orthopaedic Sports Medicine Research Award

Low Energy Extracorporeal Shock Wave Therapy as a Treatment for Greater Trochanteric Pain Syndrome

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Great trochanteric pain syndrome (GTPS) is often a manifestation of underlying gluteal tendinopathy. GTPS occurs most frequently in sedentary individuals aged 40-60 years. However, GTPS has also been identified in younger age groups, particularly impact athletes such as runners, hurdlers, and basketball players.

Regardless of treatment, symptoms of GTPS can linger for many months and relapses are relatively common. This is particularly frustrating for athletes, and can necessitate extended periods of modified training.

Extracorporeal shock wave therapy (SWT) has been used successfully to treat numerous types of tendinopathies. The aim of this study was to determine whether low-energy SWT is a safe and effective management modality for patients with chronic GTPS.

Thirty-three patients with chronic GTPS received low-energy SWT (SWT Group; 2000 shocks; 4 bars of pressure which is equal to 0.18 mJ/mm^2 , total energy flux density, 360 mJ/mm^2). Thirty-three patients with chronic GTPS were not treated with SWT, but received additional forms of non-operative therapy (control group). All SWT procedures were performed without anesthesia. Evaluation was by change in visual analog score (VAS), Harris Hip Score (HHS) and by Roles and Maudsley score.

Mean pre-treatment VAS scores for the control and SWT groups were 8.5 and 8.5 respectively. One month, 3 months, and 12 months after treatment, the mean VAS for the control and SWT groups were 7.6 and 5.1 ($p < .001$), 7 and 3.7 ($p < .001$), and 6.3 and 2.7 ($p < .001$) respectively. One month, 3 months, and 12 months after treatment, the mean HHS for the control and SWT groups were 54.4 and 69.8 ($p < .001$), 56.9 and 74.8 ($p < .001$), and 57.6 and 79.9 ($p < .001$) respectively. At final follow-up, the number of excellent, good, fair, and poor results for the SWT and control groups were 10 and 0 ($p < .001$), 16 and 12 ($p < .001$), 4 and 13 ($p < .001$), and 3 and 8 ($p < .001$) respectively. Chi Square analysis showed that the percentage of patients with excellent ("1") or good ("2") Roles and Maudsley scores (i.e. successful results) 12 months after treatment was statistically greater in the SWT group compared to the control group ($p < .001$). There were no significant complications.

This study demonstrates that low energy SWT is safe, that it can be used effectively to treat patients with chronic GTPS, and that satisfactory improvement is maintained for at least one year. Further randomized, prospective studies are needed to confirm these findings.