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Treatment of Achilles tendonitis with radial shock waves

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Approach: A study was conducted to determine the effect of treatment with radial shock wave therapy in chronic Achilles tendonitis previously treated unsuccessfully by conservative means.

Method: 40 patients suffering from Achilles tendonitis were treated with a shock wave device from Electro Medical Systems in a prospective study.

Each patient had up to five sessions at weekly intervals. 2000 low-energy shock waves were administered at each session. The patients were examined before each treatment and 1, 4, 12, 26 and 52 weeks after the last treatment. The pain level was entered on a visual analogue scale. A semi-objective examination method (dolormeter) was used for the first time to record tenderness and the pain threshold.

Results: After the conclusion of the treatment, tenderness fell significantly from 6.7 ± 3.2 VAS to 2.6 ± 3.6 VAS and pain on weight-bearing fell from 7.9 ± 1.7 to 2.1 ± 2.6 ($p < 0.5$). The average pain-free walking time rose from 12 minutes before the therapy to 53 minutes after the therapy. Only one week after the last treatment, very good and good results were obtained in 72.5 % of patients, so that the patients were able to continue their training programme. The results improved successively in further review examinations.

Conclusion: Radial shock wave therapy appears to be an effective method in the treatment of Achilles tendonitis not responding to conservative measures, enabling operative intervention to be avoided to a large extent.