

Unfocussed shock wave therapy: New cost-effective treatment for calcaneal spur and tennis elbow

Haupt G., Diesch R., Straub T., Penninger E., Frölich T., Schöll J., Lohrer H.



Department of Urology, Ruhr-Universität Bochum, Germany and
Multicenter Unfocussed Shock Wave Therapy Study Group

Introduction

Extracorporeal shockwave therapy has been used in the treatment for tennis elbow and calcaneal spur as an efficient alternative to open surgery. However, a major drawback is availability and costs of extracorporeal shock wave machines. We developed a new device for treatment with unfocussed shock waves.

Material and methods

In a prospective, randomized, multicentric and blinded trial the new treatment was performed on patients with tennis elbow or calcaneal spur. For both diagnosis 100 patients each were randomized to either verum or sham treatment. The study was approved by the ethics committee of the Ruhr-Universität Bochum, Germany. Only patients with a minimum history of 6 months, at least two different unsuccessful conservative treatment approaches and a definite indication for open surgery were included. Informed consent of the patient was gained.

History and physical examination were recorded including more than 20 parameters. One to three treatments were performed with or without local anesthesia. Reexaminations were scheduled after 1, 4 and 12 weeks, respectively, with detailed physical examination and sorrow subjective scalings. Crossover from sham to verum treatment was allowed after a minimum of 4 weeks.

Results

To date more than 90 % of the patients are evaluable up to 12 weeks. Complete analysis will be presented in detail. Summarized results are listed in the table.

Good and intermediate (%)	tennis elbow		calcaneal spur	
	verum	sham	verum	sham
1 week	50	40	74	44
4 weeks	86	46	88	36
12 weeks	100	44	82	38

Conclusions

In a placebo controlled, randomized, prospective and multicentric study unfocussed shock wave therapy is a successful treatment for calcaneal spur as well as tennis elbow. This new therapy has even greater potential since treatment parameters can be further optimized and have to be part of new studies. Since the new device is by far cheaper than conventional extracorporeal devices it seems to be an efficient as well as cost effective new therapy.