

# Side effects of extracorporeal shock waves

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**Institution:**

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**Device and producing company:**

Various devices, all FDA approved

**Introduction:**

Extracorporeal shock waves have been widely used for decades. Several randomised multi centre trials have shown efficacy but some without clinical relevance with regard to outcome criterion. Two FDA trials were re-analysed for adverse events.

**Methods:**

A total of 504 patients were randomly assigned to receive extracorporeal shock wave therapy or identical placebo intervention. ESWT was indicated if they fit standard inclusion criteria. Within 3 sessions at 1 week intervals, 6000 shock waves were applied to treat chronic plantar heel pain. All treatments were performed without any local anaesthesia. Main time endpoint was defined as 12 weeks after final ESWT.

**Results:**

Twelve weeks after last intervention several adverse events were documented. In the active group, 117 adverse events were documented as device related and 35 AE were scored as not device related after ESWT. If identical placebo ESWT were performed 19 relevant device related adverse events and 39 not device related AE occurred. No device related severe adverse events such as tendon rupture or neural pathological finding were reported.

**Discussion:**

After standard ESWT of plantar heel pain adverse events occurred, some of which have shown clinical relevance. Although needed, no long term follow up was performed. Neither were systemic adverse events screened with regard to endocrine pathologies despite the fact that they occurred when ESWT was applied to kidney stones.

**Conclusion:**

ESWT has shown to have a good efficacy/adverse events ratio but thorough knowledge of musculoskeletal disorders indicated for ESWT and treatment of ESWT-induced side effects is essential.