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Extracorporeal shock wave therapy (ESWT) for heel pain[1]

Extract

[1] Translation of the key statement of the final report N15-06 *Extrakorporale Stoßwellentherapie beim Fersenschmerz* (Version 1.0; Status: 29 March 2017). Please note: This document was translated by an external translator and is provided as a service by IQWiG to English-language readers. However, solely the German original text is absolutely authoritative and legally binding.

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This report was prepared in collaboration with external experts.

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Key statement

Research question

The aim of this report is to assess the benefit of extracorporeal shock wave therapy (ESWT) in patients with heel pain (plantar fasciitis) with respect to patient-relevant outcomes. No limitations were applied regarding the comparator intervention.

Conclusion

A total of 29 studies were analysed. The data of 1 further study were not analysed, because of excessive inter-group differences in the percentages of patients who were not included in the analysis. Twenty additional studies were not used, because the analgesic intake was neither predefined nor recorded and included in the analysis (co-intervention bias). The analysed studies contained results on the outcomes pain, physical function status, including activities of daily living, and adverse effects of treatment. Only 1 study reported on the outcome health-related quality of life. The outcome health-related social functioning (participation in professional and social life) was not reported by any of the studies. For the outcome adverse effects of treatment, none of the comparisons revealed a hint of benefit or harm. All adverse effects of treatment which were reported in the studies were considered not severe.

ESWT versus passive comparator interventions

Fifteen studies were analysed for the benefit assessment of ESWT versus sham therapy. Overall, there was proof of benefit of ESWT for the outcome pain on the basis of statistically significant effects at the early and late analysis points. For the outcome physical function status, the early analysis period (6 weeks to 6 months) and the late analysis period (6 months to 5 years) showed statistically significant effects in favour of ESWT. Overall, a hint of benefit was derived on the basis of the early analysis point. For the outcome health-related quality of life, the early analysis point showed a statistically significant, but not clinically relevant, effect. Therefore, no hint was derived.

ESWT versus active comparator interventions

A total of 8 studies were analysed. Three studies were available for the comparison ESWT versus glucocorticoid injection. For all other comparisons, only 1 study each was available for analysis.

For the comparison ESWT versus surgery (endoscopic plantar fasciotomy), there was no hint of greater or lesser benefit of ESWT for the outcomes pain and physical function status at the early or late analysis points.

For the comparison ESWT versus ultrasonic treatment, a hint of greater benefit of ESWT was found for the outcome pain based on the early and late analysis points.

For the comparison ESWT versus ultrasonic treatment in combination with stretching exercises, there was no hint of greater or lesser benefit for the outcome pain.

For the comparison ESWT versus stretching exercises, a hint of lesser benefit of ESWT was found for the outcome pain based on the early analysis point. Since 1 further study on this comparison has not been published, publication bias cannot be ruled out.

For the comparison ESWT versus glucocorticoid injection, a hint of lesser benefit of ESWT was found for the outcome pain based on the early analysis point. Since 3 further studies have not yet been published, publication bias cannot be ruled out.

For the comparison ESWT versus conventional treatment consisting of iontophoresis with analgesic intake, a hint of greater benefit of ESWT was found for the outcomes pain as well as physical function status, each on the basis of the early analysis point.

Comparison of ESWT variations

A total of 6 studies were used for these comparisons, 1 of which had 3 arms.

Four studies compared ESWT delivering a higher total energy dose versus ESWT delivering a lower total energy dose. The different studies varied the total energy doses in different ways, i.e., by the number of sessions, number of impulses, and energy flow density. Three of these studies showed significant advantages of a higher versus lower total energy dose, with the latter being markedly low in all comparator groups. Therefore, it cannot be ruled out that these actually constituted comparisons with sham therapy rather than dose-response comparisons. The results do not permit any conclusion regarding a recommended energy dose.

Three studies investigated other versions of ESWT (fluoroscopic versus symptom-oriented identification of the application site, use of ESWT with versus without local anaesthetic (LA), and distribution of the total energy dose over fewer versus more treatment sessions). None of the 3 comparisons showed a hint of greater or lesser benefit.

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