



Low-Intensity Extracorporeal Shock Wave Therapy for Erectile Dysfunction: a Systematic Review and Meta-Analysis.

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Abstract

OBJECTIVE: To use systematic review and meta-analysis to assess the efficacy of low-energy extracorporeal shockwave therapy (LI-ESWT) for erectile dysfunction (ED) was undertaken with a meta-analysis to identify the efficacy of the treatment modality.

METHODS: A comprehensive search of the PubMed, Cochrane Register and Embase databases to March 2017 was performed for randomized controlled trials reporting on patients with ED treated with LI-ESWT. The International Index of Erectile Function (IIEF) and the Erection Hardness Score (EHS) were the most commonly used tools to evaluate the therapeutic efficacy of LI-ESWT.

RESULTS: There were 9 studies including 637 patients from 2005 to 2017. The meta-analysis revealed that LI-ESWT could significantly improve IIEF (mean difference [MD]: 2.54; 95% CI, 0.83-4.25; p= 0.004) and EHS (risk difference[RD]: 0.16; 95% CI, 0.03-0.28; p = 0.01)). Therapeutic efficacy could last at least 3 mo (MD: 4.15; 95% CI, 1.40-6.90; p =0.003). Lower energy density(0.09mj/mm², MD: 4.14; 95% CI, 0.87-7.42; p = 0.01) increased number of pulses (3000 pulses per treatment, MD: 5.11; 95% CI, 3.18-7.05, p < 0.0001) and shorter total treatment courses(<6 weeks, MD: 3.73; 95% CI, 0.54-6.93; p = 0.02) resulted in better therapeutic efficacy.

CONCLUSIONS: These studies suggest that LI-ESWT could significantly improve the IIEF and EHS of ED patients. The publication of robust evidence from additional RCTs and longer-term follow-up would provide more confidence regarding use of LI-ESWT for ED patients.

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KEYWORDS: Erectile Dysfunction; Meta-Analysis; Randomized Controlled Trial; Shock Waves

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