

The predictor of low-intensity extracorporeal shockwave therapy to convert non-responder to responder of phosphodiesterase type 5 inhibitors in patients with erectile dysfunction

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Objectives: Managing patients with erectile dysfunction (ED) who failed to respond to phosphodiesterase type 5 inhibitors (PDE5is) is a challenging task. Recently, low-intensity extracorporeal shockwave therapy (LI-ESWT) was reported to improve ED by inducing neovascularization and enhancing perfusion of the penis. The current study was performed to determine the important predictor of LI-ESWT to convert non-responder to responder of PDE5is in patients with ED.

Materials and Methods: This was an open-label single-arm prospective study. ED patients with an erection hardness score (EHS) ≤ 2 under a maximal dosage of PDE5is were enrolled.

Sociodemographic information and detailed medical history were recorded. LI-ESWT treatment consisted of 3,000 shockwaves once weekly (1000 shockwaves to the distal penis, base of penis and corporal bodies at the perineum)(Storz, Duolith SD1 T-Top) for 12 weeks. All patients continued their regular PDE5is use. The EHS and the 5-item version of the International Index of Erectile Function (IIEF-5) were used to evaluate the change in erectile function 1 and 3 months after LI-ESWT. Success of treatment was defined as EHS 3 or greater, which indicated the regaining of an erection sufficient for vaginal penetration.

Results: A total of 52 patients were enrolled. After LI-ESWT treatment, 35 of the 52 patients (67.3%) could achieve an erection hard enough for intercourse (EHS ≥ 3) under PDE5is use at the 1-month follow-up. Initial severity of ED was the only significant predictor of a successful response (EHS1: 35.7% vs. EHS2: 78.9%, $p = .005$). Thirty-three of the 35 (94.3%) subjects who responded to LI-ESWT could still maintain their erectile function at the 3-month follow-up.

Conclusions: LI-ESWT can serve as a salvage therapy for ED patients who failed to respond to PDE5is. Initial severity of ED was an important predictor of a successful response.

Disclosure:

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