Low intensity extracorporeal shockwave therapy for erectile dysfunction: a study in an Indian population.

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Abstract

INTRODUCTION:

Erectile dysfunction (ED) has been shown to be associated with a number of physical conditions and affects not only physical but also psychosocial health. Currently oral, on-demand phosphodiesterase type 5 inhibitors (PDE5i) are preferred first line treatment. Though effective, these drugs have limitations and are associated with significant non-compliance, side effects and do not reverse the underlying pathology. Non-invasive low intensity shockwave therapy (LISWT) has been shown to significantly improve erectile function in men previously PDE5i dependent. We describe our experience and results with this therapy in an Indian population of men with ED. This study assessed the efficacy of low intensity extracorporeal shockwave therapy (LI-ESWT) on Indian men with organic ED who had previously responded to PDE5i.

MATERIALS AND METHODS:

All the patients underwent a 1 month PDE5i washout period. Men were randomized to receive either 12 sessions of LI-ESWT (n = 95) or placebo/sham therapy (n = 40). Before the first treatment, erectile function and penile hemodynamics were assessed to substantiate a vascular etiology for the ED. Outcomes were assessed using Erection Hardness Score (EHS), International Index of Erectile Function-Erectile Function Domain (IIEF-EF domain) and Clinical Global Impression of Change (CGIC) scores at 1, 3, 6, 9 and 12 months post-treatment.

RESULTS:

We found a significant increase in the EHS and IIEF-EF Domain scores from visit 1 to follow up 5 (12 months) in the treated group compared to the placebo group. By 1 month after treatment there were highly significant differences between the LI-ESWT and placebo groups ($p < 0.0001$). Out of 60 men in the LI-ESWT group who completed the study, 47 (78%) men at FU1 and 43 (71%) at FU5 who were initially unable to achieve spontaneous erections hard enough for penetration (EHS ≤ 2) were able to do so (EHS ≥ 3) compared to none in the placebo group. The treatment was well tolerated and none of the men experienced treatment related discomfort or reported any adverse effects from the treatment.

CONCLUSIONS:

In this double-blind, placebo-controlled study, LI-ESWT demonstrated a positive long term clinical effect with improvement in erectile function of Indian men with vasculogenic ED who were prior responders to PDE5i therapy. The efficacy and tolerability of this treatment, coupled with its long term benefits and rehabilitative characteristics, make it an attractive new therapeutic option for men with vasculogenic erectile dysfunction.

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