

## **Impact of aging and comorbidity on the efficacy of low-intensity shock wave therapy for erectile dysfunction.**

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#### **Abstract**

#### **OBJECTIVES:**

To evaluate the efficacy of low-intensity shock wave therapy and to identify the predictive factors of its efficacy in Japanese patients with erectile dysfunction.

#### **METHODS:**

The present study included 57 patients with erectile dysfunction who satisfied all the following conditions: more than 6-months history of erectile dysfunction, sexual health inventory for men score of  $\leq 12$  without phosphodiesterase type-5 inhibitor, erection hardness score grade 1 or 2, mean penile circumferential change by erectometer assessing sleep related erection of  $< 25$  mm and non-neurological pathology. Patients were treated by a low-energy shock waves generator. A total of 12 shock wave treatments were applied. Sexual health inventory for men score, erection hardness score with or without phosphodiesterase type-5 inhibitor, and mean penile circumferential change were assessed at baseline, 1, 3 and 6 months after the termination of low-intensity shock wave therapy.

#### **RESULTS:**

Of 57 patients who were assigned for the low-intensity shock wave therapy trial, 56 patients were analyzed. Patients had a median age of 64 years. The sexual health inventory for men and erection hardness score (with and without phosphodiesterase type-5 inhibitor) were significantly increased ( $P < 0.001$ ) at each time-point. **The mean penile circumferential change was also increased from 13.1 to 20.2 mm after low-intensity shock wave therapy** ( $P < 0.001$ ). In the multivariate analysis, age and the number of concomitant comorbidities were statistically significant predictors for the efficacy.

#### **CONCLUSIONS:**

**Low-intensity shock wave therapy seems to be an effective physical therapy for erectile dysfunction. Age and comorbidities are negative predictive factors of therapeutic response.**