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## Is there an ideal candidate to be treated with low-intensity extracorporeal shock wave therapy?

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**Introduction:** Low-intensity shock waves (LISW) is a novel treatment for patients with erectile dysfunction (ED), and vascular risk factors (VRF). Its therapeutic action is based on angiogenic stimulus, thus improving penile blood circulation.

**Objective:** To identify the ideal candidate in order to achieve the best possible results with LISW in patients with ED and VRF who have failed to respond to the maximum dose of PDE5i.

**Material and Method:** From January to November 2014, 68 patients with a mean age of 62.5 (32-82) were treated. Fifty-seven patients were seen during a 6-month follow-up phase post treatment, and thus included in the evaluation.

An Israeli equipment (Renova by Direx) was implemented to apply the LISW. Patients received four-weekly sessions of 5000 waves on each corpora cavernosa of penis and crura. During the month's treatment, patients received a daily dose of 5mg Tadalafil. Changes were assessed taking into account different variables such as age, ED evolution, and comorbidities.

**Assessment method:** Erectile function was assessed with IIEF-6; and question 3 of the Sexual Encounter Profile (SEP 3) which evaluates the possibility of finishing the sexual act; a global assessment question (GAQ); and the Erection Hardness Score (EHS).

**Statistical Analysis:** Mann-Whitney Test

**Results:** The IIEF-6 score increased in 5.6 points, from 14.9 to 20.5 ( $p < 0.0001$ ). The SEP 3 went from 33% to 54% ( $p = 0.0066$ ). Sixty-one point four percent of the patients reported an improved erectile function and the EHS went from 2.3 to 2.8 points ( $p = 0.0017$ ). Table 1 below shows the different variables considered for this study

**Conclusion:** In our series, LISW have proven to be effective in more than half of the patients with ED and VRF, though we have been unable to identify the best candidates. However, we observed the most meaningful changes in patients under 60 years of age. The presence of more than one comorbidity, or an ED of over 36 month period did not affect treatment efficacy.

Analyzed Variables

| Analyzed Variables           | N  | IIEF basal | IIEF 6 <sup>th</sup> month | P      | SEP 3 basal (%) | SEP 3 6 <sup>th</sup> month (%) | P     | GAQ YES (%) | Improvement EHS P |
|------------------------------|----|------------|----------------------------|--------|-----------------|---------------------------------|-------|-------------|-------------------|
| Age ≤ 60                     | 18 | 14.6       | 21.3                       | 0.0001 | 37              | 65                              | 0.03  | 78          | 0.007             |
| Age > 60                     | 39 | 15.1       | 20.1                       | 0.0003 | 31              | 49                              | NS    | 54          | 0.03              |
| Progression time < 36 months | 20 | 15.1       | 20.8                       | 0.0025 | 43              | 56                              | NS    | 66          | NS                |
| Progression time > 36 months | 37 | 14.8       | 20.3                       | 0.0001 | 27              | 52                              | 0.008 | 59          | 0.007             |
| 1 comorbidity                | 19 | 15.2       | 21.1                       | 0.005  | 29              | 53                              | NS    | 68          | 0.03              |
| 2 or + comorbidities         | 38 | 14.8       | 20.3                       | 0.0001 | 36              | 55                              | 0.03  | 59          | 0.02              |

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