## SEXUAL MEDICINE

### Low-Intensity Extracorporeal Shockwave Therapy in Sexual Medicine: A Questionnaire-Based Assessment of Knowledge, Clinical Practice Patterns, and Attitudes in Sexual Medicine Practitioners

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#### **ABSTRACT**

**Introduction:** Low-intensity extracorporeal shockwave therapy (LI-ESWT) has emerged as a treatment option for male sexual dysfunction. However, results have been contradictory.

**Aim:** To investigate the knowledge, practice patterns, and attitudes regarding LI-ESWT among experts in sexual medicine.

**Methods:** A study-specific questionnaire was handed out at the 18th Congress for the European Society for Sexual Medicine. Participants were queried on their knowledge about LI-ESWT and about their use of the equipment.

Main Outcome Measures: Descriptive data on the knowledge of LI-ESWT and perception of treatment effects.

Results: One hundred ninety-two questionnaires were available for analysis. Most respondents were physicians (79.7%) and most of these specialized in urology (58.9%). Overall, 144 of 192 (75%) reported that they were familiar with LI-ESWT in sexual medicine. Twenty-seven (14.1%) had performed the treatment. Of the 117 non-users who were familiar with LI-ESWT, 37 sometimes referred patients for the treatment. Nevertheless, 103 of 144 (71.5%) stated that they considered LI-ESWT an effective treatment for erectile dysfunction (ED) and 10 of 144 (6.9%) considered it an effective treatment for Peyronie disease. Of participants who regarded LI-ESWT an effective ED treatment, 91.2% would consider the treatment specifically for vasculogenic ED and 81.6% would combine it with phosphodiesterase type 5 inhibitors. Most participants (83.7%) regarded LI-ESWT as safe. A urology background (odds ratio = 2.4; 95% CI = 1.3-4.8; P = .0093) and working in a private setting (odds ratio = 2.8; 95% CI = 1.5-5.3; P = .0084) were significant predictors of familiarity with LI-ESWT in sexual medicine and of being an LI-ESWT user. Likewise, urologists were significantly more likely than non-urologists to consider the treatment effective (odds ratio = 2.8; 95% CI = 1.1-7.1; P = .033).

Conclusion: LI-ESWT is well known among experts in sexual medicine and the treatment is perceived as safe and effective against vasculogenic ED when combined with phosphodiesterase type 5 inhibitors. The treatment is mainly offered by urologists. Fode M, Lowenstein L, Reisman Y. Low-Intensity Extracorporeal Shockwave Therapy in Sexual Medicine: A Questionnaire-Based Assessment of Knowledge, Clinical Practice Patterns, and Attitudes in Sexual Medicine Practitioners. Sex Med 2017;X:XX—XX.

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**Key Words:** Erectile Dysfunction; Low-Intensity Extracorporeal Shockwave Therapy; Peyronie Disease; Sexual Medicine; Surveys and Questionnaires

#### INTRODUCTION

In recent years, low-intensity extracorporeal shockwave therapy (LI-ESWT) has emerged as a treatment option in male sexual dysfunction. The treatment has been proposed for Peyronie

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disease (PD) and erectile dysfunction (ED). Although results have generally been disappointing for PD, there is currently hope that the method might provide a cure for ED, thus rendering it superior to the common symptomatic treatments.<sup>1–3</sup> Although

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the molecular and cellular mechanisms of the effect of LI-EST are unknown, different machines have been tested in randomized trials. However, results have been contradictory, with some studies implying a potential benefit and others showing inconclusive or even discouraging results. <sup>4–6</sup> Moreover, the optimal treatment regimen regarding energy densities and timing and number of treatment sessions is unknown. Nevertheless, it is clear that LI-ESWT has already been adapted into clinical practice.

#### **AIMS**

The purpose of this study was to investigate the knowledge, practice patterns, and attitudes regarding LI-ESWT among experts in sexual medicine.

#### **METHODS**

A specific questionnaire was developed by the study group. This was handed out to delegates at the 18th Congress for the European Society for Sexual Medicine (ESSM) in Madrid from February 4–6, 2016 at a booth with information on the ESSM. The conference overall had 1.117 registered participants. The questionnaire captured demographic data, professional background, and experience with sexual medicine. Participants were queried on their knowledge about LI-ESWT and about the use of the equipment in their own practice. The general questions centered on attitude toward the treatment, possible indications, perception of benefits and risks, clinical evaluation of effects, and scientific evidence. Delegates who used LI-ESWT in their own practices were asked about treatment regimens and side effects to the treatment.

Descriptive statistics were performed and multivariate logistic regression analyses were used to identify independent predictors for familiarity with LI-ESWT, use of treatment, perception of effectiveness, and attitude toward scientific evidence on the treatment. Age, professional background, workplace (academic, private, or public settings), years in practice, and percentage of time spent dealing with sexual medicine were evaluated for each of these outcomes. All statistical analyses were conducted using SAS 9.4 for Windows (SAS Institute, Cary, NC, USA). Two-sided *P* values less than .05 were considered statistically significant.

#### MAIN OUTCOME MEASURES

The primary outcome was to provide descriptive data on the knowledge of LI-ESWT and perception of treatment effects among sexual medicine practitioners. Secondary outcome measurements included assessments of concrete treatment patterns and attitudes toward clinical and scientific evaluations of LI-ESWT in sexual medicine.

#### **RESULTS**

One hundred ninety-two questionnaires were available for analysis. The responders consisted of 77% men and 23% women

from 33 different countries, which corresponded well to that of the overall congress participants. The median age was 46 years (range = 23–71). One hundred fifty-three of 192 (79.7%) were physicians and 113 (58.9%) of these specialized in urology. Sixteen of 192 (8.3%) were psychologists and 14 of 192 (7.3%) identified themselves as sexual therapists. Most participants had practiced for at least 10 years and almost everyone devoted at least one fourth of their time to sexual medicine. Further demographics are listed in Table 1.

Overall, 144 of 192 (75%) reported that they were familiar with the use of LI-ESWT in sexual medicine. Twenty-seven (14.1%) had performed the treatment themselves and/or had participated in studies, 30 (15.6%) recommended it to their patients, and 87 (45.3%) knew it only from the literature. The 27 LI-ESWT users had performed a median of 50 treatments (range = 3–1,000). Of the 117 participants who were familiar with LI-ESWT but did not offer it themselves, 73 never referred their patients to the treatment, 27 did so less than once per

**Table 1.** Demographics of study participants

Demographics	All participants (N = 192)
Responders' age (y), median (range)	46 (23–71)
Sex, n (%)	15 (22 + 15
Men	138 (71.9)
Women	42 (21.9)
Undisclosed	12 (6.3)
Occupation, n (%)	
Physician (urologist)	113 (58.9)
Physician (other)	40 (20.8)
Psychologist	16 (8.3)
Sexual therapist	14 (7.3)
Physical therapist	1 (0.5)
Nurse	1 (0.5)
Preclinical researcher	5 (2.6)
Undisclosed	2 (1.0)
Setting of practice, n (%)	
Academic hospital	71 (37.0)
Private clinic or private practice	44 (22.9)
Public health care system	29 (15.1)
Private and public	45 (23.4)
Undisclosed	3 (1.6)
Years in sexual medicine practice, n (%)	
<5	41 (14.6)
5–10	45 (23.4)
>10	105 (54.7)
Undisclosed	1 (0.5)
Percentage of practice in sexual medicine, n (%)	
100	28 (14.6)
75	42 (21.9)
50	74 (38.5)
25	35 (18.2)
<25	12 (6.8)

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