

# Urologist's Practice Patterns Including Surgical Treatment in the Management of Premature Ejaculation: A Korean Nationwide Survey

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**Purpose:** According to previous studies, the prevalence of premature ejaculation (PE) in Korea ranges from 11.3% to 33%. However, the actual practice patterns in managing patients with PE is not well known. In this study, we have endeavored to determine how contemporary urologists in Korea manage patients with PE.

**Materials and Methods:** The e-mailing list was obtained from the Korean Urological Association Registry of Physicians. A specifically designed questionnaire was e-mailed to the 2,421 urologists in Korea from May 2012 to August 2012.

**Results:** Urologists in Korea diagnosed PE using various criteria: the definition of the International Society for Sexual Medicine (63.4%), Diagnostic and Statistical Manual of Mental Disorders (43.8%), International Statistical Classification of Disease, 10th edition (61.7%), or perceptual self-diagnosis by the patient himself (23.5%). A brief self-administered questionnaire, the Premature Ejaculation Diagnostic Tool, was used by only 42.5% of the urologists. Selective-serotonin reuptake inhibitor (SSRI) therapy was the main treatment modality (91.5%) for PE patients. 40.2% of the urologists used phosphodiesterase type 5 inhibitors, 47.6% behavior therapy, and 53.7% local anesthetics. Further, 286 (54.3%) urologists managed PE patients with a surgical modality such as selective dorsal neurectomy (SDN).

**Conclusions:** A majority of Korean urologists diagnose PE by a multidimensional approach using various diagnostic tools. Most urologists believe that medical treatment with an SSRI is effective in the management of PE. At the same time, surgical treatment such as SDN also investigated as one of major treatment modality despite the lack of scientific evidence.

**Key Words:** Physician's practice patterns; Premature ejaculation; Urologic surgical procedures

## INTRODUCTION

Premature ejaculation (PE) is one of the most common

sexual dysfunctions in male patients. Previous studies have reported that approximately 30% of adult men suffer from PE [1-3]. In spite of the increasing interest in PE in the field

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of sexual medicine, our knowledge about the prevalence, etiology, diagnosis, and treatment of PE is scarce. Thus far, multiple factors such as neurobiological cascades related to the metabolism of neurotransmitters, hyperthyroidism, psychological problems, critical life experiences, and penile hypersensitivity are commonly accepted as the etiology of PE. Because of these multiple etiologies of PE, a unified definition of PE has not been established. Currently, the major components of the diagnosis of PE are short intra-vaginal ejaculatory latency time (IELT), inability to delay ejaculation, and personal distress [4,5].

There are many treatment options for patients with PE, such as psychological education, selective-serotonin reuptake inhibitors (SSRIs), phosphodiesterase type 5 (PDE5) inhibitors, topical anesthetics, selective dorsal neurotomy (SDN), and hyaluronic acid gel glans penis augmentation [6-8]. The preferred management of PE is an on-demand SSRI or daily SSRI. Shindel et al [9] reported that 71% of the urologists in the United States prescribed an SSRI as the initial management of PE. However, many urologists used other treatment options in 35% of the initial treatment cases and 50% of the second-line treatment cases.

Previous studies showed that the prevalence of PE in Korea is between 11.3% and 33% [3,10,11]. However, the daily practice patterns of urologists in the management of patients with PE have not been studied. In this study, we conducted an e-mail-based survey to analyze the practice patterns of Korean urologists in their management of patients with PE.

## MATERIALS AND METHODS

After the Institutional Review Board approval was obtained from our hospital, the e-mailing list was retrieved from the Korean Urological Association Registry of Physicians. A specifically designed questionnaire was e-mailed to the 2,421 urologists in Korea from May 2012 to August 2012. Second and third e-mails were sent to non-responders at one and two months after the first e-mail. The questionnaire consisted of five questions about responder demographics, eleven questions about the management of PE, and ten questions about SDN. The survey explored practice characteristics and attitudes, as well as diagnosis and treatment patterns, for the manage-

ment of PE. There was no compensation provided for participation.

## RESULTS

Replies were received from 527 (21.8%) practicing urologists. Two hundreds and ninety (55%) were private clinicians. One hundred and fifty-eight (30%) and 79 urologists (15%) worked at teaching hospitals and non-teaching hospitals, respectively. The mean age was 43.2 (interquartile range [IQR]: 37 to 50) years. The mean period after acquiring board certification was 12.3 (IQR: 5 to 12) years (Table 1).

Approximately half of the urologists (232, 44%) had treated less than two PE patients per week for the past three months. One hundred and sixty-five (31.3%) urologists treated three to five PE patients. Seventy-eight (14.8%) treated six to ten PE patients. Fifty (9.5%) treated more than eleven PE patients a week. A multiple-choice question revealed that urologists in Korea based their diagnosis of PE most commonly on the definition by International Society for Sexual Medicine (ISSM, 63.4%), Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR,

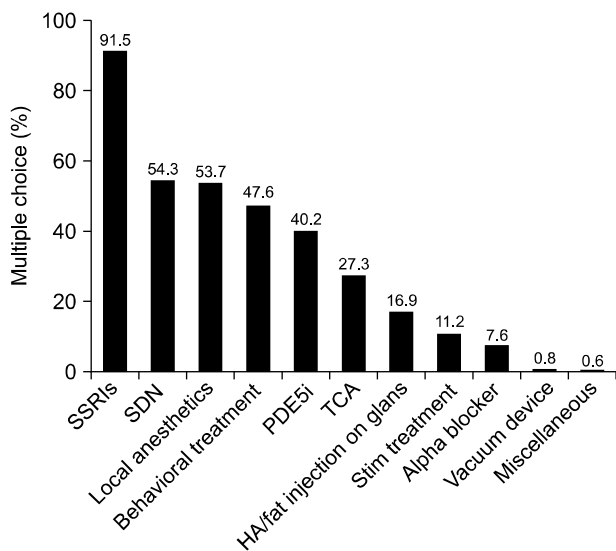
**Table 1.** Demographics of the study participants

| Variable               | Number (%) |
|------------------------|------------|
| Age (yr)               |            |
| 30~39                  | 187 (35.5) |
| 40~49                  | 204 (38.7) |
| 50~59                  | 106 (20.1) |
| ≥60                    | 28 (5.3)   |
| Practice setting       |            |
| Private clinicians     | 290 (55.0) |
| Non-teaching hospital  | 79 (15.0)  |
| Teaching hospital      | 158 (30.0) |
| Years in practice      |            |
| 0~10                   | 253 (48.1) |
| 11~20                  | 181 (34.4) |
| 21~35                  | 75 (14.2)  |
| >35                    | 18 (3.5)   |
| PE treatments per week |            |
| ≤2                     | 232 (44.0) |
| 3~5                    | 165 (31.3) |
| 6~10                   | 78 (14.8)  |
| 11~20                  | 50 (9.5)   |
| >20                    | 14 (2.7)   |

PE: premature ejaculation.

43.8%), International Statistical Classification of Disease, 10th edition (ICD-10, 61.7%), and self-diagnosis by the patient alone (23.5%) in descending order. Only 42.5% of the urologists used the Premature Ejaculation Diagnostic Tool, a brief self-administered questionnaire provided to patients. Diagnosis based on IELT was varied, with 157 (29.8%) considering less than 1 minute as the appropriate criteria, while 22.2% believed that less than 2 minutes was appropriate. Furthermore, 20.7% based their diagnosis on subjective symptoms, irrespective of IELT.

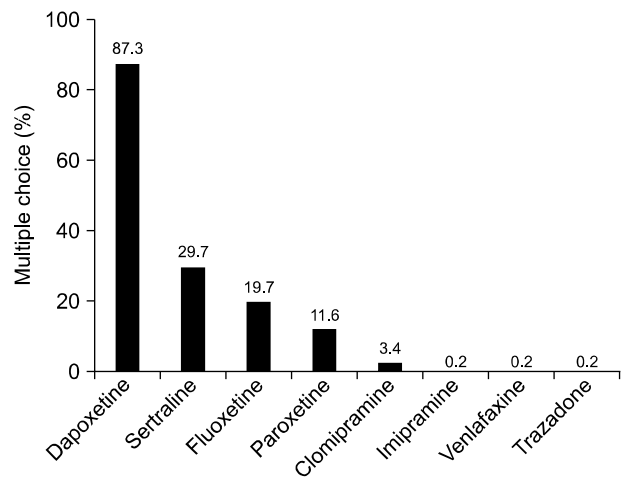
Urologists in Korea treated PE patients with multiple modalities (Fig. 1). SSRI was considered the primary treatment of choice. SSRIs were used by 91.5% of the uro-



**Fig. 1.** Korean urologist practice pattern for treatment of premature ejaculation. SSRIs: selective-serotonin reuptake inhibitors, SDN: selective dorsal neurotomy, PDE5i: phosphodiesterase 5 inhibitor, TCA: tricyclic antidepressant, HA: hyaluronic acid.

gists, and dapoxetine was the most frequently prescribed medication (87.3%) followed by the off-label use of sertraline (29.7%), fluoxetine (19.7%), and paroxetine (11.6%) (Fig. 2). PED5 inhibitors were used by 40.2% of the urologists, and behavioral therapy was used by 47.6% for PE patients. The urologists of 53.7% used local anesthetics. Further, some urologists managed PE patients with surgical modalities such as SDN (286, 54.3%) and hyaluronic acid gel glans or autologous fat glans augmentation (89, 16.9%).

Three hundreds and eighty-four (72.9%) urologists in Korea had prior experience of SDN. Almost all private clinicians (272, 93.5%) reported that they were capable of performing SDN. Half of the hospital-based urologists reported a prior experience of performing SDN (112, 47.5%). Two hundreds and twelve (72.9%) private clini-



**Fig. 2.** Preference of selective-serotonin reuptake inhibitors in Korean urologists.

**Table 2.** Complications after selective dorsal neurotomy

| Complication                        | Experience of surgeon (%) | Total 44,000 cases (%) |
|-------------------------------------|---------------------------|------------------------|
| Recurrence of premature ejaculation | 69.3                      | 10.2                   |
| Pain or paresthesia on glans        | 59.9                      | 3.8                    |
| Edema                               | 32.8                      | 1.7                    |
| Scar formation                      | 21.1                      | 0.5                    |
| Hematoma                            | 18.2                      | 0.4                    |
| Erectile dysfunction                | 18.8                      | 0.4                    |
| Wound dehiscence                    | 15.9                      | 0.3                    |
| Psychotic disorder                  | 3.1                       | 0.1                    |
| Penile curvature                    | 2.3                       | <0.1                   |
| Other                               | 10.2                      | <0.1                   |

cians, 31 (39.7%) non-teaching hospital urologists, and 48 (30.0%) teaching hospital urologists thought that SDN was necessary for the management of PE patients. SDN was performed most commonly when patients themselves demanded surgical management. SDN was suggested to patients who benefitted from local anesthetics or who suffered from penile hypersensitivity, as diagnosed by a penile vibration perception threshold test. The urologists believed that 57% patients were satisfied with SDN, 39.6% patients considered it 'not bad,' and only 3.4% patients were dissatisfied.

The most common complication of SDN was reported to be the recurrence of PE. Pain or paresthesia on the glans, and edema of the operation site followed (Table 2). Other than the abovementioned complications, hematoma, wound dehiscence, scar formation at the operation site, penile curvature, ejaculation dysfunction, erectile dysfunction, and psychotic disorder were noted by experienced urologists. However, the rate of other complications was very low.

## DISCUSSION

Selective SSRIs had led the way to a new era of treatment. However, the understanding of PE is not yet complete. In fact, although an on-demand SSRI, a daily SSRI, or local anesthetics have been introduced for the treatment of PE, many patients continue to suffer from PE due to a lack of definite treatment.

There are several proposed etiologies of PE. With regard to etiologies, PE can be classified largely into lifelong PE and acquired PE. Lifelong PE can be explained by either the hypersensitivity of the 5-HT<sub>1A</sub> receptor or the hyposensitivity of 5-HT<sub>2C</sub> [12], and is considered to be related to genetic factors [13,14], biologic hypersensitivity, and hyperexcitability of the glans penis [15]. Erectile dysfunction, prostatitis, thyroid dysfunction, and psychological problems were also considered possible explanations of acquired PE [16-18].

The diagnosis of PE consisted of three principles: short IELT, inability to delay ejaculation, and negative personal consequences. In DSM-IV-TR and ICD-10, the authors believed that distress or interpersonal difficulties and inability to control ejaculation were important components of

PE diagnosis along with short sexual intercourse time [5,19]. In ISSM 2008, a vaginal penetration time of within 1 minute was proposed for the diagnosis of PE as the most important factor [4]. In this survey, 63.4% Korean urologists thought that ejaculation within 1 minute of vaginal penetration was the most important diagnostic criterion. However, interpersonal difficulties (43.8%) and ejaculation before the patient and partner could enjoy a sexual interaction sufficiently (61.7%) were considered important as well. 23.5% of the urologists diagnosed PE if the patient thought he had PE.

SSRIs are very effective medications. An SSRI can be taken on-demand or daily or in combination with some other medication. Daily medication with an SSRI showed a significantly elongated stopwatch IELT. In prospective studies, a daily dose of paroxetine (20 mg) increased IELT by up to 783%; a daily dose of sertraline (50 mg), by up to 313%; and a daily dose of fluoxetine (20 to 40 mg), by up to 295% [20]. An on-demand SSRI, dapoxetine, increased the stopwatch IELT from 0.9 minutes to approximately 3 minutes [21]. In this survey, dapoxetine was the most frequently prescribed medication. Although SSRIs are effective oral medications, they have a drawback that cannot be ignored. A previous study reported that 12.6% of the patients (6 of 48) dropped out from a 6-week daily SSRI trial because of side effects [22]. The reported side effects were fatigue, drowsiness, nausea and vomiting, dry mouth, decreased libido, and ED [23].

Korean urologists used local anesthetics in 53.7% of their cases for the management of PE, which is higher than the usage rate of urologists in the United States [9]. Lidocaine gel was the most common local anesthetic used (58.8%), followed by the Severance Secret cream (19.4%) and lidocaine-prilocaine cream (12.0%). There was an opinion that PE is related to penile hyposensitivity in ED patients [24]. However, many previous studies have reported that penile sensitivity was related to ejaculatory latency [25] and that penile hypersensitivity was related to PE [15]. Therefore, a blockage of the relationship between penile hypersensitivity and PE may improve the IELT time. Previous data showed that local anesthetics increased the stopwatch IELT by 5.6 to 7.8 times [26,27]. Local anesthetics did not have general side effects. However, local irritation, loss of penile sensation, and erectile dysfunction

were reported. Moreover, a local anesthetic was inconvenient and messy to use and could interfere with arousal and spontaneity. Although it occurred in only a small number of cases, the loss of vaginal sensation with a female partner was reported.

According to the European Urology Guideline Form 2010, the effectiveness of PDE5 inhibitors in the treatment of PE is associated with a 2B level of evidence and a grade C level of recommendation, which reflects that the use of these compounds in patients with PE and without ED is not yet fully established [23]. However, some of the recent data support the favorable effects of PDE5 inhibitors with respect to the treatment of PE. According to the result of the first meta-analysis, the PDE5 inhibitor has an overall positive effect on the treatment of PE as monotherapy or as a component of a combination regimen when compared with SSRI monotherapy [28]. In this study, many of the participating Korean urologists (40.2%) prescribed PDE5 inhibitors for the treatment of PE.

Thus far, across the world, surgical management of PE such as SDN has not been recommended for the treatment of PE because surgical management may induce permanent loss of sexual function, and reliable data on SDN are insufficient [29]. However, SDN increased IELT from 1.1 minutes to 3.8 minutes and improved ejaculation control [8]. Except post-operative wound pain, no other complication was noted. In PE patients who were treated by using computed tomography (CT)-guided cryoablation of the dorsal penile nerve, IELT increased from 54.7 seconds to 182.5 seconds [30]. Four of the 24 patients developed increased flaccidity and improved in time. Further, the glans gel injection was effective for PE patients with glans penis hypersensitivity [7]. In this survey, SDN was one of popular surgical procedures for private clinic urologists in Korea to selected patients who had an effect for local anesthetics or who had a penile hypersensitivity. Urologist answered that 56% of PE patients were satisfied after SDN. Only 3.4% of the PE patients were dissatisfied with it. Although recurrence was observed in 10% of the patients, other complications were very rare.

However, unfortunately, a standard procedure for SDN does not exist. The location of resection and the number of resected dorsal nerves varied among individual urologists. The cost of the procedure varied as well. SDN was more

common in private clinics than in hospitals. Hospital urologists, particularly in teaching hospitals, had less interest in SDN. Therefore, a well-designed study should be conducted considering both private and hospital urologists.

Through this nationwide survey, we understood how contemporary urologists in Korea manage patients with PE. Korean urologists believe that subjective symptoms such as interpersonal difficulties and inability to control ejaculation are important along with definitive IELT for the diagnosis of PE. They have many treatment modalities and commonly perform SDN. However, studies or references in support of SDN are lacking. Further studies are required to establish effective treatment options for PE, including surgical treatment.

## CONCLUSIONS

A majority of Korean urologists diagnose PE by a multi-dimensional approach using various diagnostic tools. Most urologists believe that medical treatment with SSRI is effective in the management of PE. At the same time, surgical treatment such as SDN also investigated as one of major treatment modality despite the lack of scientific evidence.

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