Chapter 8
Premature Ejaculation

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Abbreviation

APA	American Psychiatric Association
AUA	American Urological Association
ED	Erectile dysfunction
EMLA	Eutectic mixture of local anesthetics
ICD	International Classification of Diseases
IELT	Intravaginal ejaculatory latency time
ISSM	International Society for Sexual Medicine
PDE5	Phosphodiesterase type 5
PE	Premature ejaculation
PRN	Pro re nata; as needed
SSRI	Selective serotonin reuptake inhibitor
WHO	World Health Organization

Introduction

Premature ejaculation (PE) is a male sexual disorder characterized by (a) ejaculation which always or nearly always occurs before or within about 1 min of vaginal penetration, (b) the inability to delay ejaculation on all or nearly all vaginal penetrations, and (c) negative personal consequences such as distress, bother, frustration, and/or the avoidance of sexual intimacy. While the complaint of ejaculating more rapidly than desired is common, in isolation this is not diagnostic of the disorder. Two types of PE have been described: lifelong, which occurs from

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the first sexual encounter, and acquired, which ensues after a period of normal sexual function. This disorder is associated with low self-esteem, anxiety, depression, and relationship strain. Lack of awareness about the condition and its treatable nature represent barriers for seeking treatment, leaving many patients unattended. There are multiple options for the management of PE, including behavioral therapy, topical, and oral medications. Some of the treatments for PE can have a negative impact on seminal parameters, and care must be taken in patients trying to conceive. Particularly in couples who are under significant stress due to fertility difficulties, PE can represent a significant added burden. Successful treatment of PE has the potential to significantly improve the quality of life and well-being of patients and their partners.

Definition of Premature Ejaculation

The two definitions for premature ejaculation (PE) that had been utilized most often come from the American Psychiatric Association [1] and the World Health Organization [2] (Table 8.1). Definitions were derived by expert panels and were devoid of any evidence-based support of definitions.

When studying PE, an endpoint commonly used in studies and clinical practice is the intravaginal ejaculatory latency time (IELT, also known as IVELT). The IELT is the time from the first moment of vaginal penetration to ejaculation and orgasm. However, in the absence of patient and/or partner distress, IELT should not be used to characterize sexual dysfunction. On the hand the complaint of "ejaculating prematurely" is frequent even among men with normal IELT [3]. Thereby, no single factor adequately defines PE, and its definition should include multiple factors [4].

The International Society for Sexual Medicine (ISSM) first convened a panel of experts in 2007 to review the current medical literature and to arrive at a functional definition for lifelong PE [5][6]. The panel defined PE as having three components: (a) ejaculation which always or nearly always occurs before or within about 1 min of vaginal penetration, (b) the inability to delay ejaculation on all or nearly all vaginal penetrations, and (c) negative personal consequences such as distress, bother, frustration, and/or the avoidance of sexual intimacy. Lifelong PE is characterized by onset from the very first sexual encounter and is persistent, whereas acquired PE starts after a period of normal ejaculatory latency and is associated with milder reductions in IELT.

In an attempt to create a classification that has better clinical utility, Waldinger proposed to categorize PE into four subtypes: lifelong, acquired, natural variable, and premature-like ejaculatory dysfunction (Table 8.2) [4]. While it may seem a subtle change, this subcategorization has clinical utility because this system categorizes nearly all patients seen in clinical practice. The class with natural variable PE consists of men who only occasionally suffer from rapid ejaculation, which in

Table 8.1 Definitions of premature ejaculation

Organization	Year	Definition
APA—DSM-V	2013	• Ejaculation within approximately 1 min following vaginal penetration and before the individual wishes • Present for at least 6 months and experienced in almost all or all occasions (75–100 %) • Causes significant distress to the individual • Not better explained by another disorder or stressor
ISSM	2008	• Ejaculation within about a minute • Inability to delay ejaculation • All or nearly all vaginal penetrations • Negative personal consequences
AUA	2004	• Ejaculation occurring sooner than desired • Ejaculation before or shortly after penetration • Causes distress to one/both partners
APA—DSM-IV	2000	• Persistent or recurrent ejaculation with minimal sexual stimulation before, on, or shortly after penetration • Ejaculation before the person wishes it
ICD-10 (WHO)	1993	• Inability to delay ejaculation sufficiently to enjoy intercourse • Ejaculation before/very soon after beginning of intercourse (within 15 s) or in the absence of sufficient erection for penetration • Not due to prolonged sexual abstinence

APA American Psychiatric Association, *WHO* World Health Organization, *ISSM* International Society for Sexual Medicine, *AUA* American Urological Association, *ICD* International Classification of Diseases

this schema is considered normal. Finally, men with premature-like ejaculatory dysfunction complain of rapid ejaculation but have normal or even prolonged IELT.

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) definition now more closely matches that of the ISSM requiring (a) a persistent or recurrent pattern of ejaculation during partnered sexual activity within approximately 1 min following vaginal penetration and before the individual wishes; (b) present for at least 6 months and experienced in almost all or all occasions; (c) causes significant distress to the individual; and (d) not better explained by a nonsexual mental disorder or as a consequence of a severe relationship distress or other significant stressors and is not attributable to the effects of a substance or another medical condition [7].

Epidemiology

Premature ejaculation (PE) is different from other sexual dysfunctions as it is highly dependent on the cultural context, is self-identified, and is self-rated in terms of severity. In the Multicountry Concept Evaluation and Assessment of Premature

Table 8.2 Variations of premature ejaculation (adapted from Waldinger)

Type	Features
Lifelong	• PE at all or nearly all intercourse attempts • With all or nearly all women • In majority of cases within 1 min • Consistent during life
Acquired	• Rapid ejaculation occurring at some point in life • Normal ejaculation prior to onset of PE • Source of problem often identifiable (organic, psychological)
Natural variable	• Rapid ejaculation inconsistent and irregular
Premature-like ejaculatory dysfunction	• Subjective perception of rapid ejaculation • IELT in normal range • Preoccupation with imagined rapid ejaculation • Preoccupation with poor control of ejaculation • Preoccupation not accounted for by another mental disorder

Ejaculation (MCCA-PE) study, the perception of average time a man to ejaculate varied greatly from 7 to 14 min [8].

Over the past 5 years, our understanding of the epidemiology of PE has been expanded significantly by several prospective studies (Table 8.3). One of the first large-scale prospective studies to assess the prevalence of PE was the National Health and Social Life Survey [9]. One of the major aims of this study was the assessment of the variation of timing and sequence of individual sex activity in response to the life course events and changes in social and cultural environment. This study was interview-based and used a probability sample of 3,442 men aged 19–59 years. Subjects were questioned regarding "climaxing too early" over the course of the preceding 12 months. Using this definition, the prevalence of PE in the study was 29 %. Of note, there appeared to be no significant impact of age on the PE prevalence.

Patrick et al. in 2005 conducted an industry-sponsored, 4-week multicenter observational study in heterosexual men in a stable monogamous relationship for more than 6 months [10]. PE was defined according to DSM-IV criteria. The study couples were required to engage in sexual intercourse at least twice weekly and record IELT with a partner-held stopwatch. 1,587 subjects were enrolled in the study, and the prevalence of premature ejaculation was 13 %. Demographic characteristics were similar between PE and non-PE groups. Subjects in the PE group had significantly shorter IELT compared to subjects in the non-PE group. The median IELT values were 1.8 and 7.3 min, respectively, for the PE and non-PE group. However, significant overlap existed in the distribution of IELT values between the two groups. 95 % of subjects in the non-PE group had IELT values of at least 2 min, while only 50 % of subjects in a PE group met that threshold, further supporting that IELT alone cannot adequately define PE.

Table 8.3 Prospective prevalence studies

Author	Year	Number of patients	Definition of PE	Methods	Prevalence	Comments
Giuliano	2007	1,115	DSM-IV	• Prospective, 8-week observational study at 44 centers in five European countries • Stopwatch IELT • PRO measures	18 %	• PE group: IELT $\leq$2 and $\leq$4 min in 75 and 56 %, respectively • Non-PE group: IELT $\leq$2 and $\leq$4 min in 25 and 12 %, respectively
Porst (PEPA)	2006	12,133	Two proprietary questions regarding ejaculatory control and bother	Web-based survey conducted in three countries (USA, Germany, Italy)	22.7 %	• No variation between countries • No variation with age • Men with PE more likely to have other sexual dysfunctions
Fasolo	2005	12,558	DSM-IV	Screening at 186 Italian sexual medicine clinics	21.2 %	• PE prevalence decreased with age • 70 % had acquired PE
Laumann (GSSAB)	2005	13,618	Single question regarding achieving orgasm too quickly	Interviews/questionnaire to men in 29 countries	20–30 %	• Geographical variation
Patrick	2005	1,587	DSM-IV	• Prospective, 4-week observational study at 42 US centers • Stopwatch IELT • PRO measures	13 %	• Median IELT 1.8 vs. 7.3 min in PE and non-PE groups • Significant overlap in IELT values between groups • PE group with lower mean rating on PRO questions
Laumann (NHSLS)	1994	3,442	Single question regarding climaxing too early	• Population-based survey • Interview-based • Population 19–59 years old	29 %	• Representative of the general US population

In the *Global Study of Sexual Attitudes and Behaviors (GSSAB)*, Laumann et al. conducted an international poll of 13,618 male subjects in 29 countries [11]. Subjects were questioned in either face-to-face or telephone interviews and in certain countries by mailed questionnaires. The prevalence of PE, which in this analysis was defined using a single question regarding "achieving orgasm too quickly," ranged between 20 and 30 % with significant geographical variation. Fasolo et al. analyzed 12,558 men presenting to 186 sexual medicine clinics and found a prevalence of PE using DSM-IV criteria at 21 % [12]. Interestingly, in this analysis 70 % of the PE patients had acquired PE, indicating that lifelong PE is of much lower prevalence than acquired PE.

Porst et al. in the *Premature Ejaculation Prevalence and Attitudes (PEPA)* study recruited 12,133 men using a web-based survey conducted in three countries (USA, Germany, Italy) [13]. PE in this study was defined using two proprietary questions, one regarding ejaculatory control and the other bother. The prevalence of PE in this analysis was 23 %. Approximately half of men had lifelong premature ejaculation, and nearly one third reported that they had acquired PE, while the remaining 15 % of men indicated that PE had been present when they first began having sex and then went away and returned again more recently.

Giuliano et al. performed an industry-sponsored, prospective, 8-week observational study at 44 centers in five European countries [14]. Stopwatch IELT was used as the endpoint in 1,115 men. Using DSM-IV criteria, the prevalence of PE was 18 %. In the PE group, mean IELT values less than 2 min and less than 4 min were observed in 75 and 56 % of the group, respectively. In the non-PE group, mean IELT values less than 2 min and less than 4 min occurred in 25 and 12 % of this group, respectively. In summary, the prevalence of PE is approximately 20–30 %, and when adjusted for the presence of ED (and secondary acquired PE), it is more common in younger men.

Recent studies have clearly shown wide variations in the prevalence of PE when different definitions are used. Lee et al. studied 2,081 patients (1,035 had stopwatch-recorded IELT) and found that the prevalence of PE according to self-report, premature ejaculation diagnostic tool (PEDT), and IELT <1 min was 19.5, 11.3, and 3 %, respectively [15]. Of note, the PEDT is a self-administered questionnaire developed to capture the factors described on the outdated DSM-IV-TR definition. A study of 3,016 Chinese men found that 25.8 % complained of ejaculating more rapidly than desired. When the complaint was further characterized to match the clinical syndromes described by Waldinger, only 4.5 % fitted the definition of acquired and 3 % the definition of lifelong PE [16]. The Global Online Sexuality Survey (GOSS) accrued results from 1,133 patients in the USA and found PE prevalences of 6.3 % according to the using the ISSM definition and 49.6 % if the PEDT was used [17]. These studies stress the importance of strict definitions for the diagnosis of PE as a disorder, since many men with complaints ejaculating more rapidly than desired do not meet the diagnostic criteria.

Impact of PE on Behavior and Quality of Life

Due to the embarrassing nature of and the lack of a simple screening tool for PE, most men do not discuss it with their physicians, nor do physicians generally assess their male patients for PE [13, 18–20]. These factors may be, at least in part, why most men with PE do not seek treatment for the condition, despite the distress it causes them. In subfertile couples this might be another factor contributing to individual and relationship stress. A lack of awareness that the condition is treatable and the fact that currently only one over-the-counter agent is approved by the US Food and Drug Administration (FDA) its treatment may also contribute.

PE can lower a man's sexual self-confidence and self-esteem. Its impact can extend to the sexual partner, with resultant effects on the sexual relationship and the relationship as a whole [10, 13, 18, 21]. For example, men have reported that their PE made them reluctant to establish new relationships [18], caused them anxiety about having intercourse [21], and even decreased their frequency of having intercourse [21, 22]. This can pose another obstacle to subfertile couples trying to conceive. Lower sexual satisfaction of female partners was found to be related to PE as well [23]. Thus, PE represents a significant unmet medical need.

Current Management of PE

Behavioral Therapy

Historically, PE was considered to be a psychological rather than a physiological problem, and it was treated with behavioral therapy and psychotherapy. Semans [24] employed the start–stop technique, and Masters and Johnson [25] added psychotherapy to complement this technique. However, these forms of non-pharmacologic therapy require time and commitment from both the individual with PE and his partner and thus may be difficult to implement and adhere to. These techniques also focus on distraction and reduction of excitement or stimulation, which may detract from overall sexual satisfaction. Although behavioral techniques have been shown to have success rates of 45–65 %, benefits are generally short-lived, and patients usually relapse [26–28]. Hawton et al. found that after 3 years of follow-up, 75 % of men with PE showed no lasting improvement [27]. De Amicis et al. also found that although men treated for PE via couples therapy experienced significant immediate benefits, these gains were not sustained when measured at a follow-up visit 3 years later [28].

Pharmacotherapy

SSRI Agents

Increasing evidence now suggests that the etiology of PE involves a strong physiological component. Preclinical research has identified a distinct ejaculation-related neural circuit in the central nervous system [29]. Psychopharmacologic studies suggest that PE may be related, at least in part, to diminished serotonergic neurotransmission; thus, pharmacologic agents might be utilized to modulate the 5-HT receptor system [30–32]. In support of the neurophysiological findings, delayed ejaculation is commonly reported as a side effect of antidepressant therapy with selective serotonin reuptake inhibitors (SSRIs) [33, 34]. In a multicenter study conducted to assess the incidence of sexual dysfunctions associated with SSRI treatment for depression, a group of 12 male patients with depression who suffered from PE before SSRI administration showed a high tolerance to the side effect of delayed ejaculation [33]. After treatment, their sexual satisfaction and that of their partners improved (treatment was with fluoxetine in five patients, paroxetine in three patients, sertraline in two patients, and fluvoxamine in two patients).

These results, along with the findings of others [31, 35–42], form some of the basis for SSRI use in the treatment of PE. The exact mechanism by which SSRI effect improved IELT is still unknown, but a variety of mechanisms have been proposed (Fig. 8.1).

SSRIs, other antidepressants, and other PDE5 inhibitors are commonly used in the treatment of PE, but these agents were not designed for the treatment of PE and are not approved for this indication by the FDA. When used for PE, they are dosed differently from their approved uses, and no large-scale, randomized, placebo-controlled clinical trials have been conducted to determine their efficacy and safety in PE. Table 8.4 contains examples of the types of trials that have been conducted in PE and illustrates, for antidepressants, that studies to date have been small (all under 100 subjects and most under 50 subjects) and have used varying definitions and evaluations of PE. As a result, conclusions regarding the efficacy and safety of these agents in men with PE are limited [20].

With regard to dosing regimens in PE treatment, as shown in Table 8.4, daily dosing and on-demand (PRN) dosing of antidepressants are often used; however, there is some evidence that a period of daily dosing is typically required prior to PRN dosing for better efficacy compared with PRN dosing alone. McMahon and Touma showed that the effect of paroxetine on prolongation of IELT after 6 weeks of treatment was significantly better if patients were treated initially with and had responded to 20 mg paroxetine daily for 2 weeks, followed by 4 weeks of PRN dosing with 20 mg, compared with patients who commenced on PRN dosing with 20 mg alone [38]. To date, studies of PRN dosing of antidepressants in men with PE have determined that these agents must be taken 3–4 h prior to intercourse to be effective. PRN dosing seems to be becoming more common than daily dosing for PE [20]; however, antidepressants were designed for continuous use and have been

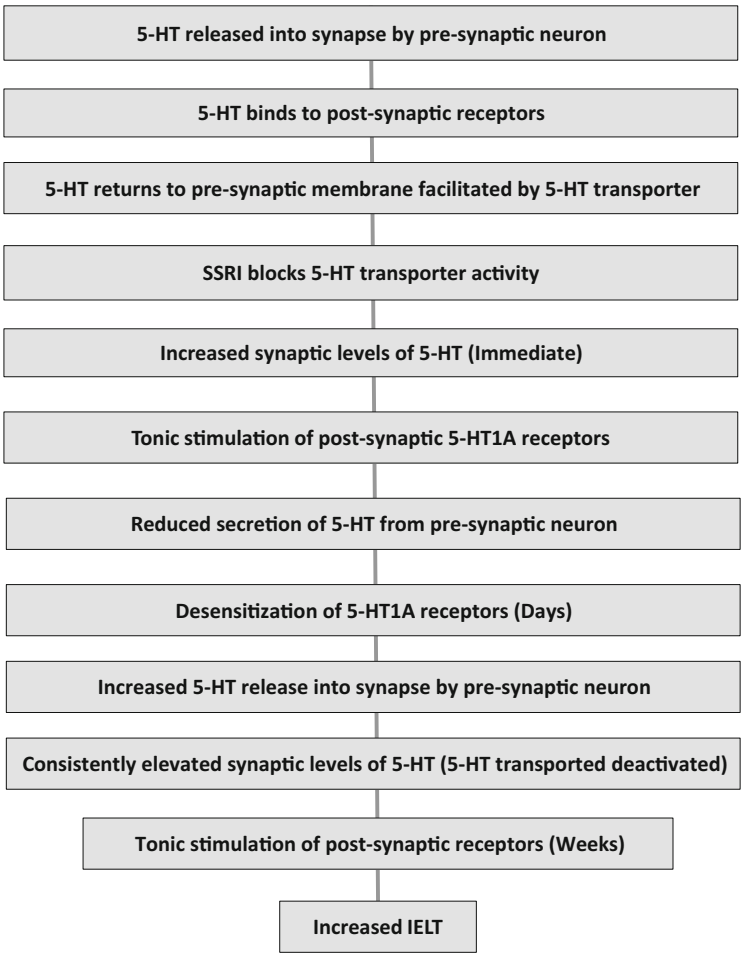

Fig. 8.1 Incidence of sexual dysfunction induced by SSRIs used for the treatment of depression ($N = 344$). Sexual dysfunction included decreased libido, delay of orgasm or ejaculation, anorgasmia or no ejaculation, and erectile dysfunction. Reprinted with permission from Montejo-González AL, Llorca G, Izquierdo JA, et al: J Sex Marital Ther 23: 176–194, 1997

shown to provide better activity in the management of PE following daily administration than following PRN dosing [38].

Daily administration of SSRIs, along with the associated side effects, may reduce patient compliance with antidepressants when used to treat PE. Compounding these factors are the findings that the onset of effect of most SSRIs in men with PE is typically 2–4 weeks [38, 41]. Manasia et al. demonstrated that administration of 90 mg fluoxetine once weekly for 3 months was more efficacious in prolonging end-of-study IELT than 20 mg fluoxetine daily in

Table 8.4 Characteristics of the most commonly used oral agents for PE treatment

Agent	Trade name	Standard daily dose	*T½* (h)	Adverse effects	Contraindication
Clomipramine	Anafranil	25–50 mg/day	19–37	Dry mouth Constipation	MAOI
Fluoxetine	Prozac Sarafem	5–20 mg/day	36	Nausea Anxiety Insomnia Anhidrosis Libido loss ED	MAOI
Paroxetine	Paxil Seroxat Pexeva	10–40 mg/day	21	Nausea Anxiety Insomnia Anhidrosis Libido loss ED	MAOI
Sertraline	Zoloft	25–200 mg/day	26	Nausea Anxiety Insomnia Anhidrosis Libido loss ED	MAOI
Dapoxetine[a]	Priligy	15–60 mg	1.5	Nausea Diarrhea Headache Dizziness Somnolence	MAOI
Tramadol	Ultram	25–50 mg	5–7	Nausea Dizziness Insomnia Dyspepsia Seizures	MAOI SSRI TCA

[a]Not currently FDA approved but approved in Europe
T½ half-life, *SSRI* selective serotonin reuptake inhibitor, *MAOI* monoamine oxidase inhibitor, *TCA* tricyclic antidepressants

80 patients with PE [41]. One drawback associated with the once-weekly schedule was that the onset of effect was prolonged to 6 weeks.

As shown in Table 8.1, SSRIs used in the treatment of PE include paroxetine (Paxil©, GlaxoSmithKline, Research Triangle Park, NC), fluoxetine (Prozac©, Eli Lilly and Company, Indianapolis, IN), and sertraline (Zoloft©, Pfizer Inc., New York, NY). In comparative studies and a recent meta-analysis, paroxetine has been shown to be more effective in prolonging IELT than other SSRIs [39, 42]. The tricyclic antidepressant clomipramine (Anafranil©, Mallinckrodt Pharmaceuticals, St. Louis, MO) has also been used to treat PE in small-scale trials [35, 37, 43]. Adverse effects of antidepressants for the treatment of PE have not been carefully studied; however, the frequency and type of side effects are expected to

be similar to those seen in patients taking these drugs for depression. Nausea, dry mouth, drowsiness, anejaculation, inhibited orgasm, and decreased libido have been commonly reported in studies to date [35]. Pharmacodynamic interactions may occur with concomitant use of monoamine oxidase inhibitors, lithium, sumatriptan, or tryptophan, as well as with concomitant use of drugs metabolized by cytochrome p450 isozymes or extensively bound to plasma proteins. Adverse effects may vary with dosing schedule (daily or PRN). Collectively, trials of antidepressants in the treatment of PE show that while some benefit on IELT is achieved by most men, the required dosing schedules, time to onset of effect, and incidence and nature of side effects limit their widespread usefulness and acceptance by patients for this condition.

Few studies have investigated the effects of SSRIs on semen parameters and fertility. An in vitro study found that all five tested SSRIs (fluoxetine, sertraline, fluvoxamine, paroxetine, and citalopram) exhibited spermicidal activity, with minimum effective concentration ranging from 0.05 to 0.5 % [44]. A case–control study of patients receiving an SSRI for depression found that these men had lower sperm counts, lower motility, higher morphological abnormality, and higher sperm DNA damage than age-matched controls [45]. Moreover, SSRI treatment duration was associated with greater compromise in seminal parameters.

Tanrikut et al. performed seminal analyses in 35 healthy volunteers at baseline and after 5 weeks of treatment with paroxetine. While there was no significant change in usual seminal parameters, abnormal sperm DNA fragmentation increased from 9.7 to 50 % [46]. Also, there was a significant decrease in serum testosterone and estradiol. The disruption of hormonal homeostasis could be mediated via stimulation of 5-HT receptors, which may increase prolactin secretion [47].

Koyuncu et al. studied 25 men with lifelong PE using the ISSM definition and normal seminal parameter. After daily escitalopram 10 mg for 3 months, there was a significant decrease in sperm concentration, motility, and normal morphology [48]. These studies suggest a negative impact of daily SSRI use on seminal parameters. The clinical implications of these findings are yet to be established. Also, on-demand treatment has not been studied.

Topical Therapies

Topical anesthetics have also been used for the treatment of PE, in an effort to decrease penile stimulation to delay time to ejaculation. Application of lidocaine 2.5 %/prilocaine 2.5 % cream (EMLA Cream, AstraZeneca Pharmaceuticals, Wilmington, DE) to the penis prior to covering it with a condom 20–30 min before intercourse delayed ejaculation in men ($N = 40$) with PE (defined as IELT $\leq$ 1 min) [49]. However, prolonged application (30–45 min) prior to intercourse resulted in loss of erection. In addition, others have found that a reduction in genital sensitivity of both partners may limit repeated use of topical anesthetics [50].

A recently published randomized, double-blind, placebo-controlled study in 42 men aged 18–50 years with PE showed that lidocaine/prilocaine cream used

over a period of 30–60 days significantly increased mean IELT (as measured by a stopwatch) from a baseline value of 1.49 min to an end-of-study value of 8.45 min ($P < 0.001$) [51]. In contrast, the placebo cream did not achieve a significant increase (1.67 min at baseline, 1.95 min at the end of the study, $P > 0.05$). In this study, men were defined as having PE based on the satisfaction of the couple with their sex life rather than by IELT. Prior to the study, six participants (three in the lidocaine/prilocaine group and three in the placebo group) had received treatment with SSRIs but had discontinued due to side effects. Side effects of topical anesthetic application included retarded ejaculation >30 min (two subjects), decreased penile sensitivity (two subjects), penile irritation (two subjects), and decreased vaginal sensitivity (one partner) [51]. These adverse events, along with the disruption of spontaneity inherent to this method, may make it an unpalatable option for men with PE and their partners. There is no data to suggest that EMLA adversely affects fertility.

Promescent is a new eutectic formulation of unionized lidocaine without prilocaine that was approved by the FDA to be sold over the counter. Its main differentiation points are the absence of prilocaine and the more rapid absorption, with onset in 10 min. Theoretically, condom use is not necessary because the rapid absorption would not cause reduced genital sensitivity in the female partner. However, clinical studies of efficacy, safety, and side-effect profiles are lacking.

PDE5 Inhibitors

Medications indicated for ED have also been studied for their efficacy in PE. In men with IELTs <1 min, PRN administration of 50 mg sildenafil combined with 20 mg paroxetine (1 h before planned sexual intercourse) after 21 days of daily administration of 10 mg paroxetine alone showed superiority to daily administration of 10 mg paroxetine for 21 days and PRN dosing of 20 mg paroxetine 3–4 h prior to intercourse [52]. Differences in treatment arms were significant after 3 and 6 months of treatment ($P < 0.01$). Patients in the sildenafil group had a higher incidence of headache and flushing (20 and 15 %, respectively) compared to those in the paroxetine-only group (10 and 0 %, respectively). In another study, men with PE who were dissatisfied with 5 % lidocaine ointment were given 20 mg paroxetine daily for 30 days and 20 mg paroxetine combined with 25–100 mg sildenafil 7 h before intercourse. Psychological and behavioral counseling was also provided throughout the study. Sildenafil combined with paroxetine and psychological and behavioral counseling significantly increased IELT and decreased the frequency of patient-reported episodes of premature ejaculation, being considered satisfactory by 56 of 58 patients [53]. By demonstrating improved efficacy through combining pharmacotherapy with non-pharmacologic therapy, this study raises the possibility that the maximum effect of any pharmacologic therapy may be enhanced by adding behavioral and psychological therapy to the treatment protocol.

Shindel et al. investigated the prevalence of complaints of ejaculating more rapidly than desired among couples presenting to an infertility clinic. This

complaint was observed in 50 % of men, but less than half of their partners corroborated the complaint. This was associated with lower scores on the Self-Esteem and Relationship Quality (SEAR) scale [54].

Lotti et al. investigated the occurrence of PE in 244 men with couple infertility using the premature ejaculation diagnostic tool (PEDT), a self-administered questionnaire developed to capture the factors on the outdated PE definition of the DSM-IV-TR. Overall, 15.6 % of patients had PEDT scores consistent with PE, and higher scores were associated with phobic anxiety [55].

In a case–control study of 1,468 infertile and 942 fertile men, Gao et al. found that the infertile patients had significantly higher prevalences of PE, anxiety, and depression. Moreover, lower IELT and higher scores on the PEDT were associated with worse score in self-rated anxiety and depression scales [56]. Fertility issues are known to cause significant stress and anxiety to couples, which might cause or exacerbate PE. Because these studies have utilized outdated definitions, the prevalence of PE, as per the current definition, in subfertile patients/couples is unknown.

Summary and Conclusions

PE is a common problem that may be distressing to individuals and their partners. PE is a treatable condition. However, more effective methods of treatment are needed. Off-label uses of antidepressants, topical anesthetics, and PDE5 inhibitors have shown some efficacy in the treatment of PE, but because the studies assessing these agents have been small, we do not have a clear understanding of their efficacy, safety, and tolerability for the treatment of PE. Furthermore, undesirable features are associated with each of these methods. Antidepressants have a long onset of action, must be taken daily for maximum efficacy, can depress libido, can cause ED, and often carry an associated stigma. Topical anesthetics may interfere with spontaneity and cause genital numbness in the man and his partner. Behavioral therapies require extensive time and commitment and continued use/practice from the man and his partner to be successful.

In conclusion, there is a need for improved treatment approaches for PE. While support and education of both the man and his partner are an integral part of therapy, PE has a physiological basis and should not be considered purely a psychological problem. Thus, medications specifically developed for PE, those that not only increase ejaculatory latency, improve control over ejaculation, and increase satisfaction with sexual intercourse but also have more convenient dosing schedules and a lower incidence of sexual side effects than existing options, will find a ready place in the pharmacologic armamentarium of the urologist, sexual medicine physician, and primary care physician. Effective treatment for PE has the potential to improve self-esteem, well-being, and relationship satisfaction. Particularly in couples facing fertility issues, it can represent removing an added burden to an already stressful situation.

An ideal pharmacologic agent should be an on-demand-dosed treatment with high rates of efficacy on early doses, have a short onset of action, not interfere with sexual spontaneity, and not have sexual side effects. In addition to providing effective treatment for PE, availability of such an agent will likely prompt dialogue between men with PE and their physicians and men with PE and their partners.

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