RICHARD E. PAYNE, MD*

Clinical Instructor, Department of Family and Preventive Medicine, University of California, San Diego, La Jolla, CA

Private Practice, North Coast Family Medical Group, Encinitas, CA

RICHARD SADOVSKY, MD*

Department of Family Medicine, State University of New York (SUNY) Downstate Medical Center, Brooklyn, NY

Identifying and treating premature ejaculation: Importance of the sexual history

ABSTRACT

Premature ejaculation (PE) is one of the most common sexual dysfunctions in men, with prevalence rates ranging from 21% to 31%. Because many physicians do not inquire about sexual dysfunction and patients are reluctant to offer it as a medical complaint, PE is underreported in clinical practice. A sexual history is therefore necessary to uncover the diagnosis. PE can have a significant impact on the quality of life of the patient and his sexual partner, and may lead to psychological distress and loss of self-esteem. It appears that PE has no single etiology, and treatments have been based on both its neurophysiologic and behavioral components. Although no therapies are currently approved for PE by the US Food and Drug Administration, medications that have shown some success include selective serotonin reuptake inhibitors, tricyclic antidepressants, phosphodiesterase type 5 inhibitors, and topical anesthetics. Behavioral techniques have been the mainstay of PE treatment, and include techniques to decrease sensory input.

DEFINITION OF THE CONDITION

Finding a universally accepted definition for premature ejaculation (PE) has been problematic. The three most commonly cited clinical definitions of PE **(Table 1)** all have two basic components: an inability to control or delay ejaculation, and resultant distress.^{1–3} The Second International Consultation on Erectile and Sexual Dysfunctions/World Health Organization¹ in 2004 and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV)² define PE as ejaculation before a person wishes it, leading to distress for one or both partners. The American Urological Association (AUA) 2004 guideline on PE³ defines it as ejaculation that occurs sooner than desired, either before or shortly after penetration, causing distress to either partner.

The American Psychiatric Association's DSM-IV further categorizes PE as either lifelong (primary), in which the patient has rarely, if ever, been able to control ejaculation, or acquired (secondary), in which the patient initially had a period of good ejaculatory control but later in life develops PE with all or specific partners or in specific situations (**Table 1**).² Lifelong PE is the most common form. Acquired PE usually begins in men in their 40s to 50s.

None of the three definitions quantifies objectively a "normal" time to ejaculation. For research purposes, the quantitative assessment used to measure ejaculatory function is the intravaginal ejaculatory latency time (IELT). It refers to the time between vaginal penetration and ejaculation, usually measured with a stopwatch or simply estimated in retrospect. Men with PE will measure this time in seconds, and almost always have an IELT less than 4 minutes.⁴ A small percentage of men will ejaculate even before penetration.

An observational study in the United States showed that men with PE had a mean IELT of 3 minutes (median of 1.8 minutes) and men without PE had a mean IELT of more than 9 minutes (median of 7.3 minutes), with considerable overlap between the two groups.⁴ A multinational population survey of IELT showed that 90% of 110 men with selfreported lifelong PE had an IELT of less than 60 seconds.⁵ Although decreased IELT was associated with the complaint of ejaculating too early, in the clinical setting, the subjective report of loss of control and distress appears to be more important to the patient. As a result, the diagnosis of PE encompasses four dimensions:⁶

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TABLE 1

Definitions/diagnostic criteria for premature ejaculation

World Health Organization¹ (2004)

Persistent or recurrent ejaculation, often but not always with minimal stimulation, before, on, or shortly after penetration, and before the person wishes it, over which the sufferer has little or no voluntary control, which causes the sufferer or his partner dissatisfaction, bother, or distress.

American Psychiatric Association DSM-IV² (2000)

- A. Persistent or recurrent ejaculation with minimal sexual stimulation before, on, or shortly after penetration and before the person wishes it. The clinician must take into account factors that affect duration of the excitement phase, such as age, novelty of the sexual partner or situation, and recent frequency of sexual activity.
- B. The disturbance causes marked distress or interpersonal difficulty.
- C. The premature ejaculation is not due exclusively to the direct effects of a substance (eg, withdrawal from opioids).

Specify type: Lifelong vs acquired

Specify type:

Generalized vs situational

American Urological Association³ (2004)

Ejaculation that occurs sooner than desired, either before or shortly after penetration, causing distress to either one or both partners.

- The ejaculatory latency
- The degree of voluntary control
- The presence of marked distress or interpersonal disturbance
- Symptoms not due to any other mental, behavioral, or physical disorder.

PREVALENCE AND SOCIAL IMPLICATIONS

PE is arguably the most common form of male sexual dysfunction.^{7,8} The National Health and Social Life Survey was a probability-based household survey in 1992 that included 1,410 men aged 18 to 59 years.⁷ It revealed that approximately 30% of all men reported "climaxing too soon." Of note, the likelihood of PE was not affected by age, marital status, or race/ethnicity. Similarly, the Global Study of Sexual Attitudes and Behaviors (GSSAB) survey of 13,618 men in 29 countries showed prevalence rates of 21% to 31%.⁸

The prevalence of PE is similar across countries. In the Premature Ejaculation Prevalence and Attitudes study, 23.4% to 25.6% of men in Germany, Italy, and the United States had the disorder.⁹

Frequent correlation with erectile dysfunction

Epidemiologic studies have found a high rate of correlation between PE and erectile dysfunction (ED). In the GSSAB survey, 41% of men who reported ED also reported PE, and 30% of men reporting PE also had ED.⁸ Other studies indicate that about 30% of men with PE also have ED.^{10,11} Although ED increases in prevalence with age, PE does not.⁷

Reluctance to report

The above prevalence rates of PE may be higher than many physicians would expect, since most physicians do not inquire about the condition and men do not frequently offer it as a medical complaint. Underreporting of PE is attributable to a number of factors, including embarrassment and loss of self-esteem on behalf of the patient, traditional low prioritization of the condition by the medical system, a lack of physician comfort with and knowledge of PE, and a lack of effective treatment options.

The interpersonal implications of PE can produce significant psychological distress. Men with PE report significantly more emotional distress, loss of self-esteem, anxiety, depression, and social isolation than men without PE.¹² In a study on the quality-of-life impact of PE, 50% of men with self-diagnosed PE were reluctant to start a new relationship and felt distress in not satisfying their partner, and 68% believed that their eroded sexual self-confidence and self-esteem was a primary concern.¹²

Effects on the partner and the relationship

These effects frequently take a toll on the patient's relationship with his sexual partner, often leading couples to avoid intercourse and intimacy altogether.^{13,14} The effects can extend beyond the purely sexual aspects of the relationship: female partners of men with PE often report that although sex may be disappointing, they are more bothered by the break in emotional intimacy after the man has his early ejaculation. Men with PE

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are often anxious, hurrying the progression of intercourse and disengaging from their partners to hide their shame. The partner sees this behavior as rejection, and both partners are often angry and frustrated.⁶

In a preliminary report of a 2005 survey of 129 women presenting in a community practice, 23.2% of women reported that their partner had PE (defined as ejaculating before she desired at least half of the time they had sex).¹⁵ Although only 40% of these women stated that their partner's PE was a problem for them, these women were significantly more likely than the rest of the surveyed women to report difficulty reaching orgasm or "feeling rushed," and 65% of them said they would be interested in counseling and/or medication to address their partner's PE.¹⁵

Limited awareness of impact and treatments

Physicians may not routinely ask patients about PE, may feel uncomfortable about asking, and may lack knowledge of the condition.¹⁶ Since PE has no significant physical comorbidities, physicians may consider it a "quality-of-life" disorder and thus relegate it to a lower priority. Our current medical system strains the patient-physician relationship, often not allowing for these discussions during brief and time-pressured appointments with patients.

The success of the phosphodiesterase type 5 (PDE-5) inhibitors for treating ED has brought the treatment of that sexual dysfunction to the forefront. As a result of direct-to-consumer marketing and education, patients more easily initiate discussions of ED with their physicians.

In contrast, with no treatment for PE approved by the US Food and Drug Administration (FDA), little patient awareness of nonapproved treatments that are available, and even less awareness that physicians may be able to help, men and their physicians adhere to a course of "don't ask, don't tell" when it comes to PE. Physicians generally prefer to treat disorders that have effective treatments backed by clear, evidencebased guidelines.

The Global Study of Sexual Attitudes and Behaviors revealed that only 9% of men reported that they had been asked about their sexual health by a physician during a routine visit in the prior 3 years.¹⁶ In contrast, 48% of the men believed that a physician should routinely ask about sexual health concerns.¹⁶

PATHOGENESIS

Although the etiology of PE remains to be fully elucidated, the neurobiological phenomenon can be described in detail. The normal male sexual response results from a complex integrated neurophysiologic pathway with four phases: excitement, plateau, ejaculation (which includes emission and ejection) and orgasm, and resolution.¹⁷ With PE, there is a blunting of the normal curve of ejaculatory response, characterized by a steep excitement phase with a shortened plateau phase followed by ejaculation/orgasm and a rapid resolution phase.

A trio of mechanisms

Ejaculation involves three basic mechanisms: emission, expulsion, and orgasm. Emission is a sympathetically mediated neural function (spinal nerves T10 through L2) that leads to contraction of the prostate gland and seminal vesicles, causing deposition of sperm/seminal fluid into the posterior urethra.¹⁸ Expulsion is also a sympathetically mediated event (spinal nerves S2 through S4) that initiates with bladder neck closure and relaxation of the external striated urinary sphincter, causing rhythmic contraction of the skeletal pelvic floor muscles.

The forebrain structures involved in ejaculation include the thalamus, amygdala, stria terminalis, nucleus paragigantocellularis, and medial preoptic area. Neurotransmitters involved with ejaculation include serotonin, dopamine, norepinephrine, oxytocin, and gamma-aminobutyric acid. Serotonin (5-HT) is known to have an inhibitory role in sexual behavior in the male. Injection of a selective serotonin reuptake inhibitor (SSRI) into rat hypothalamus has been shown to delay ejaculation, whereas administration of a selective serotonin receptor agonist has been shown to cause PE in the rat.¹⁹

Neurophysiologic and behavioral components

Theories of the etiology of PE have both neurophysiologic and behavioral components. Until recently, PE was believed to be predominantly a psychological disorder. Many researchers now believe that primary PE is caused mostly by neurophysiologic factors while secondary PE has more associated psychological contributors.

Organic theories of PE include penile hypersensitivity (reaching ejaculatory threshold more rapidly and/or having a lower ejaculatory threshold), a hyperexcitable ejaculatory reflex (faster emission/expulsion phase, faster bulbocavernosus reflex, or both), genetic predisposition (there may be a higher incidence of PE in men whose first-degree relatives have PE), and central 5-HT receptor sensitivity (possible lower 5-HT neurotransmission, 5-HT_{2c} receptor hyposensitivity, and/or 5-HT_{1a} receptor hypersensitivity, as suggested in animal models).

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TABLE 2

Symptoms and factors that may be associated with premature ejaculation

| Anxiety | Relationship change |
|---|----------------------|
| Depression | Erectile dysfunction |
| Substance abuse | Low libido |
| Relationship distress/ marital discord | |

Behavioral theories of PE, from Semans and then Masters and Johnson, proposed that PE was a learned behavior conditioned from early sexual experiences.^{20,21} In more recent years, sex therapists have focused more on the role of anxiety in the disorder. They suggest that anxiety may distract from the premonitory sensations that precede ejaculation and activate the sympathetic nervous system or lower the ejaculatory threshold. Additionally, these men may not be able to monitor and adequately manage their bodies' response to the sensations of escalating levels of sexual arousal.

Overall, it appears likely that PE does not have a single etiology but rather consists of multiple variable subtypes caused by varying contributions of biological and psychological factors.

PRESENTING SYMPTOMS

Patients often do not present with PE as their chief complaint. As such, they will not be diagnosed unless a sexual history is taken. The challenge in primary care is to make the sexual history a routine part of patient wellness evaluations and to identify those diagnoses that may predict a higher risk for sexual problems such as PE.

ED is of particular interest in this context, since an overlap of PE and ED is well established.^{8,10,11} Patients with PE may present reporting difficulty with erections when in reality they may be experiencing PE followed by a resolution-phase loss of erection. Therefore, if a patient presents with ED or is asking for a prescription for a PDE-5 inhibitor, consider the possibility of PE.

Additionally, PE may be associated with signs and symptoms of anxiety, depression, or substance abuse, as well as with difficulties or changes in the patient's relationship **(Table 2)**, although these factors are absent in many cases of PE. Because some cases of PE have physiologic causes, symptoms suggestive of prostatitis, urinary tract infection, or similar genitourinary complaints should be noted.²²

EVALUATION AND DIFFERENTIAL DIAGNOSIS

The evaluation of any problem with sexual function should be grounded in a recognition that the patient is placing great trust in his physician to treat his problem with respect and sensitivity. Active listening and a compassionate acceptance of the patient are key components of "allowing" the patient to discuss a sensitive issue such as PE. Any discomfort physicians may feel should be assuaged by the knowledge that most patients appreciate it when their physician asks about their sexual health and function.

The sexual history can be performed in the context of the review of symptoms, often during discussion of urinary tract symptoms or with the behavioral/relationship questions that are appropriate in the social history.

An appropriate initial question is, "Are you satisfied with your current sexual functioning?" This can be followed by inquiries such as, "Are you satisfied with your erections?" and "Do you ejaculate (or climax) earlier than you wish?" To determine whether the problem is one of ED or PE, the clinician should ask if the loss of erection occurs before or after ejaculation. To assess partner reaction, the clinician can ask, "Is this concern distressing to you, your partner, or both of you?" or "How has this affected your sexual relationship?"²³

Other assessments relate to the patient's perception of "loss of control" of ejaculatory function, and dissatisfaction with intercourse or the relationship. The frequency, duration, and percentage of attempts with PE can also be ascertained. The patient should be asked his subjective estimate of the time between penetration and ejaculation (the IELT), which may help clarify whether ejaculation is occurring prior to penetration.

There is no laboratory test currently available to assist clinicians with the diagnosis of PE.

Keep in mind that men may have mixed sexual dysfunction, with multiple phases of sexual activity negatively affected at the same time. A combination of libido and ejaculatory problems, or a mixture of ED and PE, is possible. Ascertaining which problem concerns the patient most, or which problem is the primary one, can lead to a therapeutic plan that is likely to meet the patient's needs.

TREATMENT

Managing PE has been a challenge for physicians, as there are currently no FDA-approved therapies for the condition and most physicians have not been trained in behavioral techniques for managing it.

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Pharmacologic interventions

Topical anesthetics have been used in an attempt to desensitize the penis in hopes of prolonging the time to ejaculation. Lidocaine/prilocaine cream (2 g/5 g) applied to the penis 20 to 30 minutes prior to intercourse, and then washed off (with or without a condom), may increase IELT, but few controlled studies have been performed.^{24,25} Drawbacks of this and other topical anesthetic approaches are the possibility of loss of erection, excessive loss of pleasurable sensation, and loss of sensation for the partner, as well as the potential for allergic reactions.

PDE-5 inhibitors prolong erections and may increase IELT in men with ED. The combination of SSRIs with PDE-5 inhibitors seems to improve PE compared with SSRI therapy alone in some studies,²⁶ but most investigators believe that PDE-5 inhibitors have limited benefit in the management of PE except for those men with acquired PE secondary to ED.²⁷ Most of the benefit of PDE-5 inhibitors is believed to be due to reduced performance anxiety as a result of improved erections.²⁸

Tricyclic antidepressants (TCAs) and SSRI antidepressants have some efficacy in the treatment of PE, but their side effects may outweigh their benefits. Adverse effects of SSRIs and TCAs may include reduced libido, ED, anorgasmia/anejaculation, drowsiness, fatigue, and gastrointestinal symptoms (Table 3).

Multiple placebo-controlled clinical trials have been conducted using the SSRIs fluoxetine, sertraline, paroxetine, citalopram, and fluvoxamine as well as TCAs such as clomipramine (the most widely studied TCA for PE).²⁹ In a comparative trial in men with PE, clomipramine was associated with a significantly higher incidence of adverse effects (23%) than were sertraline (12%) or fluoxetine (13%).³⁰ On the basis of multiple trials, paroxetine appears to exhibit the strongest effect on IELT, with fluoxetine and sertraline close behind.²⁹ More studies are needed to further define the role of citalopram and other SSRIs in PE.²⁹

Since SSRIs and TCAs are not FDA-approved for the treatment of PE, doses and dosing regimens have not been standardized. Daily use of an SSRI may have greater ability to prolong IELT than on-demand SSRI use.³¹ For clomipramine, on-demand use appears to be most effective in men whose PE is less severe.^{32,33}

All medications that are effective for PE may lose their efficacy shortly after their use is discontinued.

Dapoxetine is an investigational short-acting SSRI developed specifically for the treatment of PE and submitted for FDA approval in 2004.³⁴ Although dapoxetine has been shown to significantly prolong

TABLE 3

Available medications most widely studied for treatment of premature ejaculation*

| Drug | Dosage | Side effects |
|-----------------------------------|---|--|
| <u>Antidepressants</u> | | |
| Citalopram | 20–60 mg/day | Nausea, headache, diarrhea, fatigue, sweats, drowsiness, erectile dysfunction, reduced libido, anejaculation |
| Clomipramine | 25–50 mg/day or 25 mg 2–14 hrs before intercourse | Dry mouth, drowsiness, erectile dysfunction, nausea, vomiting, fatigue |
| Fluoxetine | 5–20 mg/day | Nausea, headache, diarrhea, fatigue, sweats, insomnia, erectile dysfunction, reduced libido, anejaculation |
| Paroxetine | 10–40 mg/day or 20 mg 3–4 hrs before intercourse | Nausea, headache, diarrhea, fatigue, sweats, drowsiness, confusion, erectile dysfunction, reduced libido, anejaculation |
| Sertraline | 25–200 mg/day or 50 mg 4–8 hrs before intercourse | Nausea, headache, diarrhea, fatigue, sweats, drowsiness, erectile dysfunction, reduced libido, anejaculation |
| Phosphodiesterase-5 inhibitor | | |
| Sildenafil | 25–100 mg 1–4 hrs before intercourse | Headache, dyspepsia, nasal congestion, flushing, visual color distortion, low back pain |
| Topical anesthetic | | |
| Prilocaine- lidocaine cream | Apply to penis 20–30 mins before intercourse | Loss of sexual sensation (both partners) |

*None of these agents has been licensed to treat premature ejaculation.

IELT relative to placebo in a pair of double-blind controlled trials,³⁵ the company developing the drug received a "not approvable" letter from the FDA in October 2005.³⁶ The questions raised in the FDA letter were not disclosed, but dapoxetine's developer stated that it plans to address the questions and continue the drug's global development program.³⁶

Choosing among treatment options. The AUA guideline on the pharmacologic management of PE³ states: "The risks and benefits of all treatment options should be discussed with the patient prior to any

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intervention. Patient and partner satisfaction is the primary target outcome of the treatment of PE." One of the guideline's recommendations is that the optimal treatment course should be based on both physician judgment and patient preference.³

Behavioral therapy

Behavioral techniques have been the mainstay of PE management for many years, although evidence of their short-term efficacy is limited. Some men use self-help approaches gained through personal experience, bibliotherapy (books), or online research. These techniques have included masturbation just prior to intercourse, the use of multiple condoms to reduce penile sensitivity, or engaging in distraction techniques (mental exercises) during foreplay, intercourse, or both.

Semans proposed the "stop-start" technique in 1956.²⁰ The purpose was for the man to stop thrusting prior to the sensation of impending ejaculation, possibly lengthening the plateau phase, and increasing awareness of the sensory input. Once the couple feels comfortable with vaginal penetration, they may be instructed to engage in "quiet vagina," in which the female partner temporarily stops moving during intercourse when the man indicates that he is approaching ejaculation, resuming once he says that he has regained control.

Masters and Johnson introduced the "squeeze" technique—stopping the thrusting motion during which the man (or his partner) squeezes the frenulum of the penis until the need to ejaculate abates.²¹ "Sensate focus" was also taught to couples to learn to enjoy touching and being touched in the absence of "performance pressures." However, subsequent trials reported high failure rates with these techniques.³⁷

More recently, sex therapists have combined psychotherapy with behavioral exercises with more success. Therapy focuses on the emotional implications of the man's PE, on relationship dynamics, and on performance anxiety management. Therapy is limited by cost, the local availability of trained therapists, and the willingness of patient and partner to participate. As might be expected, the best results have been seen in men who are motivated, are hopeful, and are in a stable monogamous relationship with a cooperative partner.³⁸

APPROPRIATE FOLLOW-UP

Primary care providers manage chronic disease with specific follow-up time intervals, but no follow-up management guideline exists for PE. Time should be spent to properly educate the patient about his disorder, legitimize his concerns, and offer help. Offering to arrange follow-up visits and encouraging the partner to attend may help the clinician gain insight into the impact of PE on the partner and the relationship.

If pharmacologic therapy is undertaken, allow sufficient time for the medication to take effect, as well as enough intercourse attempts to assess response to therapy. With this in mind, follow-up visits are best aimed at assessing the efficacy and tolerability of the medication and should be scheduled on the basis of how often the patient has sex, although follow-up is a necessity for all patients. As side effects often occur before the drugs become effective, patients should be educated about what to expect and instructed to call you if they experience side effects.

Long-term maintenance management, which consists of intermittent inquiries about sexual activity and satisfaction, and a review of treatment options when necessary, may make an initial response to treatment more durable.

WHEN TO REFER

The primary care provider may consider referral to a psychotherapist (preferably a sex therapist), a psychiatrist, or a physician with specific interest in PE if he or she is uncomfortable or insufficiently trained to care for men with PE and their partners. A team approach involving both a therapist and a physician may best help those couples who have the greatest distress or who do not respond to initial therapy. The concept of "coaching" is within the reach of primary care providers who have the sensitivity, time, interest, and knowledge to offer the patient brief and targeted psychoeducational interventions. These basic sexual counseling sessions, integrated with medication management, should include efforts to gain feedback on the efficacy of self-help and behavioral techniques in the context of the couple's sexual relationship. Efforts should focus on reducing performance anxiety and bolstering the patient's self-esteem and the couple's communication.

In the broadest sense, managing PE not only has an impact on the patient's mental well-being but fosters the health of his most important relationship. As is true with treating any sexual dysfunction, this compassionate approach reaches into the well-being of the family and beyond. If you do not think that your patient could have PE, you will not diagnose it.

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Address: Richard E. Payne, MD, North Coast Family Medical Group, 477 North El Camino Real, Suite A 306, Encinitas, CA 92024; repayne@ncfmg.com.