

A New Combination Treatment for Premature Ejaculation: A Sex Therapist's Perspective

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ABSTRACT

This article describes the diagnosis and treatment of premature ejaculation (PE) from a sex therapist's perspective and proposes that combination therapy integrating sex therapy and sexual pharmaceuticals is frequently the best treatment approach. Failure to appreciate the multimodal etiology and pathophysiology of PE makes the condition more difficult to diagnose and treat. Many physicians have tried pharmacologic approaches, but are limited to providing topical anesthetics or suggesting off-label uses of antidepressant and erectile dysfunction medications, because no medication is currently indicated specifically for PE. Furthermore, patients frequently relapse after discontinuation of the pharmaceutical. Sex therapists appreciate the multidimensional nature of PE for the patient and partner, but few patients seek out this approach, which is labor-intensive and often lacking long-term follow-up success. Most men with PE are not receiving treatment, secondary to their embarrassment about discussing their condition and a lack of clinician inquiry about sexual dysfunction. Even for those who do engage in discussion, diagnoses may be inconsistent, because a universally accepted definition of the condition and diagnostic criteria are nonexistent. Men with PE experience anxiety and lack sexual self-confidence; subsequently, their sexual and overall relationship frequently suffer. Because PE involves psychosocial and physiologic factors, treatment that addresses both should yield the best balance of function. There is interest in new agents designed specifically for PE to provide an improved pharmacotherapeutic opportunity. Yet, a combination treatment integrating pharmaceuticals and sex therapy would provide an optimized approach. Besides increasing coital latency directly, sexual pharmaceuticals could be used to provide greater opportunity for men to recognize their premonitory sensations to ejaculation more readily, facilitating a "choice point", which is key to facilitating behavioral change and learning. Such a combination approach would result in prolonged ejaculatory latency, improved treatment satisfaction, and superior long-term outcome. **Perelman MA. A new combination treatment for premature ejaculation: A sex therapist's perspective. J Sex Med 2006;3:1004–1012.**

Key Words. Primary Care Perspective in Treatment of Sexual Dysfunction; Sex Therapy; Premature Ejaculation; Psychophysiologic Studies of Sexual Function; Combination Treatment

Introduction

Premature ejaculation (PE) is a very common male sexual dysfunction. The condition is characterized by both physiologic and psychological disturbances—concerns regarding ejaculatory latency, control over ejaculation, and distress [1,2]. While the pathophysiology is not fully understood, from the perspective of the new millen-

ium, it is clear that both organic and psychosocial factors play a role in the etiology [3]. For nearly a half-century, the etiology of PE was attributed predominantly to a variety of psychogenic causes, including numerous early psychodynamic formulations. Semans (in the 1950s) [4], Masters and Johnson (in the 1960s) [5], and later Kaplan (in the 1970s) [6] described PE as a learned behavior and/or conditioned response that resulted from early

sexual experiences that were rushed and frequently associated with anxiety. Many psychological theories include anxiety as an important component, and anxiety does play a role in PE, especially when it coexists with erectile dysfunction (ED). Although often suggested historically, there is no evidence that specific psychological traits or styles are clearly associated with PE, although depression and anxiety disorders may manifest as sexual dysfunction. Relationship problems and other psychosocial events/stresses may contribute to or possibly cause PE, and should be considered, especially for men with acquired and/or situational PE. In addition, the burden of PE frequently extends to the man's sexual partner. The man's anxiety about sex and decreased sexual self-confidence, along with the interruption of intimacy (which often results from his or her reaction to the short latency), subsequently affect the quality of both the sexual and nonsexual relationship [1,2,7]. Thus, the effects of PE on the man, the partner, and the relationship as a whole warrant effective methods for diagnosis and treatment to improve functioning and quality of life.

Despite the large early literature suggesting a variety of psychogenic etiologies, there is also significant later evidence of organic determinants of variability in male ejaculatory latency and, subsequently, PE. In fact, a review of the research suggests that male ejaculatory latency probably distributes along a curve similar to numerous other human characteristics [8–15]. Organic factors suggested to account for such biologic pre-determination include: (i) central phenomena, such as hypersensitivity of serotonin (5-HT) receptors; (ii) sex hormones; (iii) variation in sexual "arousability," or a hypersensitive ejaculatory reflex; (iv) disease—primarily prostatitis associated; as well as (v) an evolutionary perspective, invoking natural selection and viewing rapid copulation as a superior reproductive strategy [14].

Unfortunately, PE may remain undiagnosed in many men, secondary to the man's reluctance to discuss it with his clinician, reluctance by clinicians to ask their patients about the presence of sexual dysfunction, and lack of universal, validated criteria for screening men for PE [7,16–18]. For those who are diagnosed, treatment is not well defined, as numerous approaches exist. Sex therapy approaches can be effective, but they cannot alleviate dysfunction in all cases. In addition, sex therapy is labor-intensive and has limited documented efficacy on long-term follow-up. Pharmacologic approaches have been limited to the

off-label use of drugs developed to treat other disorders, such as depression and ED, because no medication is currently approved by the US Food and Drug Administration (FDA) for the treatment of PE. Additionally, patients using these pharmaceuticals frequently relapse when treatment is discontinued [17]. Medications are in development specifically for the treatment of PE and may provide advantages over current pharmaceutical options. However, because PE involves both physiologic and psychological aspects, an integrated approach to therapy may be most successful. In an earlier publication in *The Journal of Sexual Medicine*, Sharlip provided a physician's viewpoint on the diagnosis and treatment of PE [19]. The objective of this article, which describes PE diagnosis and treatment from a sex therapist's perspective, was to propose that combination treatment integrating sex therapy and sexual pharmaceuticals is the best approach to the treatment of PE.

Nosology and Definition

PE has both neurobiologic and psychologic features, and while it is referred to most commonly as premature ejaculation, it has also been called early ejaculation and rapid ejaculation. Although not all investigators agree on one name, there is a consensus as to what constitutes the condition being named [14]. Each of the above names focuses on a defect in timing; however, PE is more than just a shortened time to ejaculation. PE affects satisfaction with sexual intercourse, psychological well-being, and relationship well-being, in addition to time to ejaculation and control over ejaculation [1,2,7]. These factors are reflected in the majority of definitions that have been put forth to describe the condition. The Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, text revision (DSM-IV-TR) defines PE as "persistent or recurrent ejaculation with minimal sexual stimulation before, on, or shortly after penetration and before the person wishes it. The condition must also cause marked distress or interpersonal difficulty, and cannot be due exclusively to the direct effects of a substance" [20]. The guideline of the American Urological Association for the pharmacologic management of PE uses a definition of "ejaculation that occurs sooner than desired, either before or shortly after penetration, causing distress to either one or both partners" [17]. The International Consultation on Urological Diseases defined PE as "persistent or

recurrent ejaculation 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 and/or his partner bother or distress" [21].

Prevalence and Description

The prevalence of PE has been estimated in large U.S. and international surveys to range from 16% to 23% [2,22–25]. PE may be either lifelong (present since sexual maturation) or acquired (developed after a period of normal ejaculatory function). These forms of PE are sometimes referred to as primary and secondary PE, respectively. Additionally, PE may be generalized (happens in all situations, with all partners) or situational (happens in specific situations and/or with specific partners). PE most commonly refers to distress over heterosexual coital latency. Men commonly report a progressively greater sense of perceived control and increased ejaculatory latency with masturbation compared with manual stimulation by their partner. Manual stimulation latency is usually easier to control than oral stimulation latency, which is usually perceived as easier to control than coital latency. The clinician is reminded that such generalities provide diagnostic guidance, but individual men may have a different phenomenological experience, which is obtained from their history.

The effect of PE on the individual and the sexual relationship is significant, and has recently been explored in greater depth. For example, men with PE have reported decreased sexual self-confidence, difficulty in establishing relationships, and distress at not satisfying their partner because of their PE [2,7]. Results of a large U.S. observational study of men classified according to DSM-IV criteria as with or without PE showed that men with PE reported lower levels of sexual satisfaction and higher levels of interpersonal difficulty and distress compared with men without PE. In addition, women partners of men with PE reported lower levels of sexual satisfaction and higher levels of interpersonal difficulty and distress than women partners of men without PE [1,2]. Hartmann and colleagues recently reported that men with PE reported being preoccupied with ejaculatory control and experienced anxiety during sex, while men without PE reported thinking about their sexual arousal and satisfaction [26].

Etiology

Ejaculation can be easily understood as occurring during the orgasm phase of an interactive, non-linear sexual response cycle, which also includes desire, arousal, and resolution [5,6,14]. Ejaculation itself is comprised of two stages, emission and expulsion. During the emission stage, the bladder neck closes, and seminal fluid is deposited into the posterior urethra. Men often experience the emission stage (phenomenologically) as the point of ejaculatory inevitability (EI). They are correct in recognizing that, at that time, it is "too late" to delay ejaculation, as expulsion is automatically seconds away. Often, unaware of these two stages, men presume that the expulsion stage, with its attendant ejection of seminal fluid, relaxation of the external sphincter, and coordinated pelvic floor bulbospongiosus contraction, constitutes the entire ejaculatory process. Premonitory sensations (PS), which correspond to bodily changes reflecting arousal, such as testicular elevation, myotonia, increased breathing, heart rate, and so forth, all precede and foreshadow the emission stage. Men with PE frequently are unable to identify and/or do not, or cannot respond quickly enough to these early warning signals to delay their ejaculatory process consciously. Indeed, consciously delaying the ejaculatory process requires both identification of these PS and a cognitive/behavioral response to them, prior to (initiation of) the emission stage. Men with PE must learn to "dial down" their mental and/or physical arousal in response to PS, to a level below their threshold for emission, in order to truly control their ejaculatory process [27]. Clinicians must also understand this sequence and should educate their patients with PE about it, in order to accomplish long-term treatment success.

While the ejaculatory process can be described, the normal ejaculatory reflex is not completely characterized. Both serotonergic and dopaminergic neurons in the central nervous system (CNS) have been identified as playing a primary role, with secondary influences from several other neurotransmitters [21]. Data regarding the exact alteration(s) in the neurologic pathway of the ejaculatory reflex in PE vary, and this is an area of active research [28,29]. Waldinger [8–11], Perelman [12–15], and Rowland [30,31] have all proposed ejaculation distribution theories, postulating that ejaculatory latency is distributed along a continuum, with genetic and biologic factors influencing either end, resulting in PE in one respect and retarded ejaculation in the other.

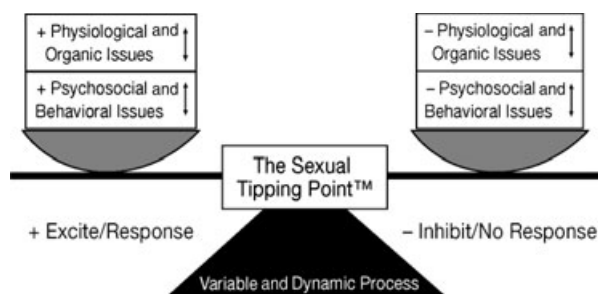


Figure 1 The multifactorial etiology of sexual function and dysfunction. The Sexual Tipping Point™ is the characteristic threshold for an expression of sexual response for any individual, which may vary within and between individuals and any given sexual experience. ©2005 Michael A. Perelman, PhD (adapted with permission).

Recent observational studies of normal ejaculatory latency support these hypotheses, although replication with larger and more diverse samples is needed [1,10]. Waldinger and colleagues specifically suggested that CNS alterations in PE involve the serotonergic system [28,32]. A number of organic hypotheses for the etiology of PE have been put forth, including 5-HT receptor disturbances, diminished serotonergic transmission, a hypersensitive ejaculatory reflex, and increased penile sensitivity [8,14,29,32,33].

Although recent research identified predominantly neurobiological components to PE [32], early theories on PE attributed the disorder primarily to psychological causes [4,5]. Psychological issues, such as increased anxiety, depression, and negative relationship dynamics, may profoundly influence overall treatment outcomes. Furthermore, PE can exacerbate the psychosocial issues that may have originally contributed to it, creating a vicious circle [14].

It now seems clear that the majority of PE cases are due to a multifactorial combination of both psychosocial and organic factors [14]. The concept of a variable set point, or Sexual Tipping Point™, can be used to illustrate the multidimensional nature of a variety of sexual dysfunctions in both men and women [34,35]. In this model, the Sexual Tipping Point™ is the characteristic threshold for an expression of sexual response for any individual, which may vary dynamically within and between individuals and any given sexual experience. The response may be inhibited or facilitated by influences from a mixture of both psychosocial and organic factors (Figure 1). Applying this concept to PE, one can envision a model for ejaculatory latency, based on an orgasmic or “ejaculatory tipping point,” which is influenced by numerous

potential psychosocial and physiologic factors for any given moment or circumstance, with one or another dominating, while others recede in importance (Figure 2).

Summarizing the research, one can conclude that the causes of PE are multidimensional and most likely reflect a man’s biologic predisposition to a rapid ejaculatory latency interacting with intrapsychic and interpersonal issues. In fact, despite the degree of organic pathogenesis, PE will always have a psychosocial component, even if the condition is initially the result of constitution, illness, or treatment [14]. The final phenomenological pathway for men with PE is the lack of ability or skill in identifying the aforementioned PS and/or adequately managing their body’s response to PS and progressively escalating levels of sexual arousal, regardless of other predisposing factors [27]. Such multidetermined variation in the ejaculation threshold, both among men and within a given individual, can be understood using the Sexual Tipping Point™ model.

Evaluation of PE

In clinical trials investigating men with PE and assessing PE treatments, intravaginal ejaculatory latency time (IELT, defined as the time from vaginal penetration to the start of intravaginal ejaculation) [11] is often used as a diagnostic and/or efficacy measure. Methods for evaluating PE in clinical practice, however, differ from those used in clinical trials. Perhaps because PE is largely a subjective definition, and uniform methods of IELT measurement and interpretation have not been established, many clinicians do not use a threshold IELT for diagnosis, relying more on their own clinical impression, as well as patient distress or bother.

After it is established that the patient has concerns regarding his ejaculatory function, it is

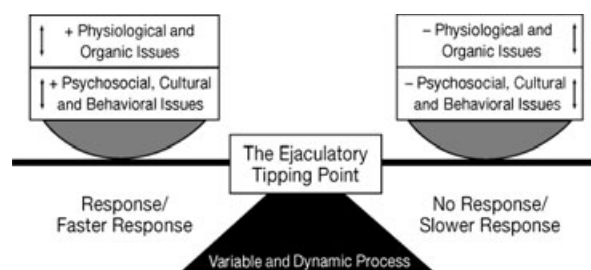


Figure 2 The multifactorial etiology of premature ejaculation; the “ejaculatory tipping point.” ©2005 Michael A. Perelman, PhD (adapted with permission).

imperative to collect a focused sexual history to obtain a full understanding of his disorder. Potential initial questions are: "What do you mean by PE?" "How long do you last from penetration to ejaculation (once you enter, how long before you ejaculate)?" This would be followed by more in-depth questioning, including an exploration of underlying psychosocial and organic factors and barriers to successful treatment. In this sex status exam approach, both the immediate cause and the history of the disorder are identified, as well as its characteristics [36]. Of course, it must be determined whether the patient is able to identify his PS. While some men will naturally last longer than others, it is the capacity to identify PS and respond to them that essentially defines a "choice point" or ability to voluntarily delay ejaculation. If he can identify his PS, can he and does he choose to respond to these sensations in such a manner that his orgasm is delayed? What actions does he take, or what does he think about in order to attempt/accomplish this task? For instance, many men will ineffectively attempt to delay ejaculation by diverting their attention to neutral or negative distracting thoughts [37]. Does his ability to identify PS vary with different sexual experiences, such as alternative partners and forms of stimulation? If the patient has tried previous treatments for his PE, these should also be explored, and reasons for failure elicited.

Treatment

Numerous treatments to improve ejaculatory control including devices, herbs, elixirs, and techniques have been referenced throughout human history [27]. As recently as 2000, Wise and Watson reported results for a very small case series using a "desensitizing ring" to treat "penile hypersensitivity" [38]. However, from the early 1900s until the 1990s, PE was considered a psychological problem, and it was treated primarily with psychosocial therapy [29]. Methods included the stop-start technique and the squeeze technique [4,5], as well as psychotherapy combined with variations of those techniques [6]. During the 1970s, experimentation with treatment format was conducted so that both single men without partners and larger numbers of patients could be treated [27,39].

Sex therapy methods for PE have shown good efficacy, and often allow the man to learn to recognize and respond to his PS. However, they require considerable commitment and practice

from the individual and his partner, and follow-up data have shown that their efficacy tends to decrease over time [40]. Importantly, some men have reported PE that was so severe that they were unable to identify their PS, for example, "I get no warning, I just come when I penetrate or before." These individuals were often frustrated with their attempts at sex therapy, and probably suffered from a more profound organic determination of their disorder. Thus, while sex therapy can be effective in improving the relationship between the individual and his partner, it cannot alleviate sexual dysfunction in all patients. In addition, for the men not involved in a committed relationship or for those starting a new relationship, this option becomes difficult and may not be feasible. While modern sex therapists have used varied techniques and protocols, including self-help therapy, group therapy, and video treatments, all of these approaches have limitations [27,37,39,41].

Currently available pharmacotherapeutic options include topical anesthetics, selective serotonin reuptake inhibitors (SSRIs), and phosphodiesterase-5 (PDE-5) inhibitors. Topical anesthetics, such as lidocaine/prilocaine cream, have been used with some efficacy [42]. SS-cream, a mixture of nine oriental herbs, has also been reported to prolong ejaculatory latency [43]. However, these treatments are typically messy and interfere with spontaneity, and burning sensations and numbing may occur with some formulations [42]. The observation that use of SSRIs for the treatment of depression was associated with the side effect of delayed ejaculation [44-47], along with findings in preclinical studies of a role for serotonin in the ejaculatory response [47], led to the off-label use of SSRIs in treating PE [44]. However, long-acting, conventional SSRIs are usually given on a chronic, daily basis to achieve the best effect on ejaculatory latency [48,49]. This dosing schedule is highly associated with typical SSRI side effects, including nausea, decreased libido, and ED [44-47]. Furthermore, when these pharmaceuticals are discontinued, symptomatic relapse usually occurs [17]. PDE-5 inhibitors, either alone or in combination with psychological and psychosocial counseling and/or SSRIs, have also been assessed recently in small trials and shown to provide some efficacy [50-52]. However, it would appear that this approach has the best efficacy and is primarily appropriate for those men suffering from a PE secondary to an underlying or incipient ED.

Future Treatments

The shortcomings of current treatments for PE have prompted efforts to develop pharmaceuticals with intended indications specific to the treatment of men with PE. Dapoxetine, which is currently unavailable in the United States (per a 2005 FDA ruling), was demonstrated to provide significant improvements in ejaculatory latency, control over ejaculation, satisfaction with sexual intercourse, and partner satisfaction with sexual intercourse, when given in an on-demand dosing schedule in large clinical trials of men with PE and their women partners [53]. Dapoxetine and any drugs for PE which may obtain FDA approval and prolong ejaculatory latency (like other successful treatments for SD) are also likely to improve sexual confidence. This increased confidence would presumably benefit the patient's sense of self-esteem, lower his anxiety, and benefit his relationship and partner's sense of overall satisfaction with intercourse.

However, clinicians' recent experiences with sexual pharmaceuticals, including the three major medications used to treat ED—Viagra® (sildenafil citrate; Pfizer, Inc., New York, USA), Levitra® (vardenafil HCl; Bayer Pharmaceuticals Corporation, Leverkusen, Germany), and Cialis® (tadalafil; Lilly ICOS LLC, Indianapolis, USA)—have reported patient-initiated discontinuation rates of up to 50% [54,55]. A rich literature is evolving, showing a number of psychosocial reasons for this, lending support to a combination treatment approach to ED [35,55,56]. Table 10 of the World Health Organization's 2nd Consultation on Erectile and Sexual Dysfunction, Psychological and Interpersonal Dimensions of Sexual Function and Dysfunction Committee report [56] provides an excellent summary of the existing evidence to date for combination treatment, primarily for ED, along with a few studies on female sexual dysfunction. There is a growing consensus that combination treatment will be the treatment of choice for all sexual dysfunctions, as new pharmaceuticals are developed for desire, arousal, and orgasm problems in both men and women [3,35,54]. In particular, a combination treatment approach may be useful and necessary for treating PE. While PDE-5 inhibitors are quite effective in restoring sexual capacity in men with ED, new pharmaceuticals in development such as dapoxetine [53] have shown somewhat modest improvements in coital latency time for men suffering from PE. Although clinical trial data suggest that even brief (1–2 minutes)

improvements in latency are significant and meaningful to many men and their partners, others may be disheartened by this sometimes limited magnitude of improvement in latency. There are also no data to suggest that new sexual pharmaceuticals will provide any greater long-term benefit or improved relapse rate once discontinued, compared with drugs currently being used off-label.

Combination Treatment for PE: Creating a "Choice Point"

While PE medications will benefit some men with PE fully, using medication to reset the ejaculatory threshold on a physiological basis will likely increase IELT for almost all men with PE. It is also likely that many of their partners would be pleased by that outcome. However, there is an even greater potential for any sexual pharmaceuticals (both existing and new) which extend coital latency. A very positive prognosis for men with PE and their partners can be realized through a combination treatment approach, in which the pharmaceuticals used for treating PE are integrated with sex therapy strategies (Figure 3). Men suffering from a profoundly organically predetermined PE with a brief coital latency (<1 minute, as defined by Waldinger and colleagues [11]) often report both being surprised by their orgasm and unable to either identify or respond to their PS. Yet, identifying these key physiological markers and deciding to reduce stimulation (mental and physical) is the key to a "stop-start" [6] behavioral approach. Sex therapy treatment failure is inevitable if a man with severe PE is unable to learn that

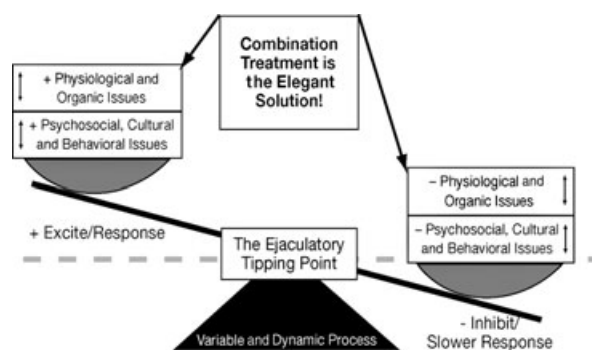


Figure 3 Combination treatment for premature ejaculation should optimize the response to therapy, as it addresses both types of factors while focusing on fixing the predominant factors in each case, to create a better balance of function. ©2005 Michael A. Perelman, PhD (adapted with permission).

PS must trigger him to reduce stimulation. While there is IELT variability between these men, almost all of them suffer from severe frustration, despair, and distress. Although applicable to others, for these men with severe PE in particular, the pharmaceutically increased IELT creates a critical teachable moment.

For instance, use of a serotonergic agent could alter the ejaculatory threshold of a man with PE; this would increase IELT, and subsequently slow down the ejaculatory process sufficiently so that he would be able to more easily recognize his PS. This would consequently increase his capability to adjust to the stimulation he is receiving sufficiently to voluntarily delay (control) initiation of the emission stage of the ejaculatory process. The medication has then created the potential for awareness of PS when none previously existed. Subsequently, a new, meaningful opportunity for control or choice emerges, for the man with an extremely short IELT or anteportal ejaculation [57]. Now able to recognize and respond to the previously elusive PS, these newly empowered men feel “in control.” Feeling “relaxed” and “not like work” becomes the new norm benefiting himself and his partner. Of course, such an approach requires a critical, albeit brief, patient education component, where PS, EI, emission, expulsion, and the basics of a stop-start sex therapy technique are taught.

As he becomes more skilled in recognizing his “choice point” and responding to it, a potential for decreased medication dosage and weaning becomes possible [57]. Other men could be taught how to adjust medication usage according to their perceived stress level, so that in periods of high stress, they would augment their newly learned skill with the medication, allowing them to maintain ejaculatory control independent of outside psychosocial stressors. For those individuals who are genetically strongly predisposed to PE, chronic use of the agent may be the appropriate choice made in consultation with their physician. This type of sex coaching and combination treatment would simultaneously address the types of noncompliance and discontinuation issues using follow-up procedures already well described in the ED combination treatment literature [3,35,54,55,57]. This author recognizes that for this paradigm of integrating sexual pharmaceuticals and sex therapy to be fully embraced and supported by the professional community, further research and peer-reviewed documentation are required.

Conclusions

Premature ejaculation is a common sexual dysfunction that has a significant impact on the man, his sexual partner, the sexual relationship, and in some cases, their overall relationship. Because PE involves both psychosocial and physiologic determinants, clinicians must aim to identify both types of factors in every patient in order to maximize therapeutic outcomes. When attempting to alleviate the symptoms of PE, a combination psychosocial and pharmacologic therapy should be prescribed, with routine follow-up reassessment in order to optimize efficacy and minimize relapse. A combination treatment approach, utilizing the conceptual model of an ejaculatory tipping point, addresses these multicausal influences while focusing on fixing the predominant factor in each case, rather than addressing dichotomous factors in isolation. This will create a better functional balance for the patient and his partner.

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References

- 1 Patrick DL, Althof SE, Pryor JL, Rosen R, Rowland DL, Ho KF, McNulty P, Rothman M, Jamieson C. Premature ejaculation: An observational study of men and their partners. *J Sex Med* 2005;2: 358–67.
- 2 Rowland D, Perelman M, Althof S, Barada J, McCullough A, Bull S, Jamieson C, Ho KF. Self-reported premature ejaculation and aspects of sexual functioning and satisfaction. *J Sex Med* 2004;1:225–32.
- 3 Perelman M. Combination therapy: Integration of sex therapy and pharmacotherapy. In: Balon R, Segraves R, eds. *Handbook of sexual dysfunction*. New York: Marcel Dekker, Inc.; 2005:13–41.
- 4 Semans JH. Premature ejaculation: A new approach. *S Afr Med J* 1956;49:353–8.
- 5 Masters WH, Johnson VE. *Human sexual inadequacy*. Boston, MA: Little Brown; 1970.
- 6 Kaplan HS. *The new sex therapy*. New York: Brunner/Mazel; 1974.

- 7 Symonds T, Roblin D, Hart K, Althof S. How does premature ejaculation impact a man's life? *J Sex Marital Ther* 2003;29:361-70.
- 8 Waldinger MD. Lifelong premature ejaculation: Definition, serotonergic neurotransmission and drug treatment. *World J Urol* 2005;23:102-8.
- 9 Waldinger MD, Quinn P, Dilleen M, Mndayat R, Schweitzer DH, Boolell M. A multinational population survey of intravaginal ejaculation latency time. *J Sex Med* 2005;2:492-7.
- 10 Waldinger MD, Zwinderman AH, Olivier B, Schweitzer DH. Proposal for a definition of lifelong premature ejaculation based on epidemiological stopwatch data. *J Sex Med* 2005;2:498-507.
- 11 Waldinger MD, Hengeveld MW, Zwinderman AH, Olivier B. An empirical operationalization study of DSM IV diagnostic criteria for premature ejaculation. *Int J Psychiatry Clin Pract* 1998;2:287-93.
- 12 Perelman M. Integrating sildenafil and sex therapy: Unconsummated marriage secondary to ED and RE. *J Sex Educ Ther* 2001;26:13-21.
- 13 Perelman MA. Retarded ejaculation. *Curr Sex Health Rep* 2004;1:95-101.
- 14 Perelman MA, McMahon CG, Barada JH. Evaluation and treatment of the ejaculatory disorders. In: Lue T, ed. *Atlas of male sexual dysfunction*. Philadelphia, CA: Current Medicine, Inc; 2004: 127-57.
- 15 Perelman M. Idiosyncratic masturbation patterns: A key unexplored variable in the treatment of retarded ejaculation by the practicing urologist. *J Urol* 2005;173(suppl):340. Abstract 1254.
- 16 Aschka C, Himmel W, Ittner E, Kochen MM. Sexual problems of male patients in family practice. *J Fam Pract* 2001;50:773-8.
- 17 Montague DK, Jarow J, Broderick GA, Dmochowski RR, Heaton JP, Lue TF, Nehra A, Sharlip ID, AUA. Erectile Dysfunction Guideline Update Panel. AUA guideline on the pharmacologic management of premature ejaculation. *J Urol* 2004; 172:290-4.
- 18 Perelman M, Shabsigh R. Drivers and barriers to treatment-seeking behavior in men with premature ejaculation. Montreal, Canada: World Congress of Sexology; 2005.
- 19 Sharlip I. Diagnosis and treatment of premature ejaculation: The physician's perspective. *J Sex Med* 2005;2(2 suppl):103-9.
- 20 American Psychiatric Association. *Diagnostic and statistical manual of mental disorders, 4th edition, text revision*. Washington, DC: American Psychiatric Association; 2000.
- 21 McMahon CG, Abdo C, Incrocci L, Perelman M, Rowland D, Waldinger M, Xin Z. Disorders of orgasm and ejaculation in men. *J Sex Med* 2004;1:58-65.
- 22 Laumann EO, Pail A, Rosen RC. Sexual dysfunction in the United States: Prevalence and predictors. *JAMA* 1999;281:537-44.
- 23 Shabsigh R, Perelman MA. Men with both premature ejaculation (PE) and erectile dysfunction (ED) experience lower quality of life than men with either PE or ED alone. Montreal, Canada: World Congress of Sexology; 2005.
- 24 Carson CC, Glasser DB, Laumann EO, West SL, Rosen RC. Prevalence and correlates of premature ejaculation among men aged 40 years and older: A United States nationwide population-based study. *J Urol* 2003;Abstract 1249.
- 25 Schiavi RC, Stimmel BB, Mandeli J, White D. Chronic alcoholism and male sexual function. *Am J Psychiatry* 1995;152:1045-51.
- 26 Hartmann U, Schedlowski M, Kruger TH. Cognitive and partner-related factors in rapid ejaculation: Differences between dysfunctional and functional men. *World J Urol* 2005;23:93-101.
- 27 Perelman M. Treatment of premature ejaculation. In: Leiblum S, Pervin L, eds. *Principles and practices of sex therapy*. New York: Guilford Press; 1980:199-233.
- 28 Waldinger MD. Lifelong premature ejaculation: From authority-based to evidence-based medicine. *BJU Int* 2004;93:201-7.
- 29 Giuliano F, Bernabe J, Gengo P, Laurin M, Clement P. Acute dapoxetine delays pudendal motoneuron reflex discharges in anesthetized rats. *J Sex Med* 2006;3(1 suppl):28. Abstract 46.
- 30 Rowland DL, Cooper SE. Behavioral and psychologic models in ejaculatory function research. *Curr Sex Health Rep* 2005;2:29-34.
- 31 Rowland D, Perelman M. Inhibited or retarded ejaculation. In: O'Leary M, ed. *Handbook of premature ejaculation*. Philadelphia, CA: Taylor & Francis; 2006.
- 32 Waldinger MD. The neurobiological approach to premature ejaculation. *J Urol* 2002;168:2359-67.
- 33 Xin ZC, Chung WS, Choi YD, Seong DH, Choi YJ, Choi HK. Penile sensitivity in patients with primary premature ejaculation. *J Urol* 1996;156:979-81.
- 34 Perelman MA. The sexual tipping point: A model to conceptualize etiology, diagnosis and combination treatment of female and male sexual dysfunction. *J Sex Med* 2006;3(1 suppl):52. Abstract 121.
- 35 Perelman MA. Psychosocial evaluation and combination treatment of men with erectile dysfunction. *Urol Clin N Am* 2005;32:431-45.
- 36 Perelman M. Sex coaching for physicians: Combination treatment for patient and partner. *Int J Impot Res* 2003;15(5 suppl):S67-74.
- 37 Zilbergeld B. *The new male sexuality*. New York: Bantam Books; 1992.
- 38 Wise ME, Watson JP. A new treatment for premature ejaculation: Case series for a desensitizing band. *Sex Relationship Ther* 2000;15:345-50.
- 39 Kaplan HS, Kohl RN, Pomeroy WB, Offit AK, Hogan B. Group treatment of premature ejaculation. *Arch Sex Behav* 1974;3:443-52.

- 40 DeAmicis LA, Goldberg DC, LoPiccolo J, Friedman J, Davies L. Clinical follow-up of couples treated for sexual dysfunction. *Arch Sex Behav* 1985;14:467–89.
- 41 Metz ME, McCarthy BW. Coping with premature ejaculation. Oakland, CA: New Harbinger Publications; 2003.
- 42 Atikeler MK, Gecit I, Senol FA. Optimum usage of prilocaine-lidocaine cream in premature ejaculation. *Andrologia* 2002;34:356–9.
- 43 Xin ZC, Choi YD, Lee SH, Choi HK. Efficacy of a topical agent SS-cream in the treatment of premature ejaculation: Preliminary clinical studies. *Yonsei Med J* 1997;38:91–5.
- 44 Crenshaw TL, Goldberg JP. Sexual pharmacology: Drugs that affect sexual function. New York: WW Norton and Company; 1996.
- 45 Montejo-González AL, Llorca G, Izquierdo JA, Ledesma A, Bousono M, Calcedo A, Carrasco JL, Ciudad J, Daniel E, De la Gandara JA, Derecho J, Franco M, Gomez MJ, Macias JA, Martin T, Perez V, Sanchez JM, Sanchez S, Vicens E. SSRI-induced sexual dysfunction: Fluoxetine, paroxetine, sertraline, and fluvoxamine in a prospective, multicenter, and descriptive clinical study of 344 patients. *J Sex Marital Ther* 1997;23:176–94.
- 46 Rosen RC, Lane RM, Menza M. Effects of SSRIs on sexual function: A critical review. *J Clin Psychopharmacol* 1999;19:67–85.
- 47 Waldinger MD, Hemmie HGB, Block BFM, Olivier B, Holstege G. Premature ejaculation and serotonergic antidepressants-induced delayed ejaculation: The involvement of the serotonergic system. *Behav Brain Res* 1998;92:111–8.
- 48 McMahan CG. Treatment of premature ejaculation with sertraline hydrochloride: A single-blind placebo controlled crossover study. *J Urol* 1998;159:1935–8.
- 49 Waldinger MD, Zwinderman AH, Olivier B. On-demand treatment of premature ejaculation with clomipramine and paroxetine: A randomized, double-blind, fixed-dose study with stopwatch assessment. *Eur Urol* 2004;46:510–5. Discussion 516.
- 50 Salonia A, Maga T, Colombo R, Scattoni V, Briganti A, Cestari A, Guazzoni G, Rigatti P, Montorsi F. A prospective study comparing paroxetine alone versus paroxetine plus sildenafil in patients with premature ejaculation. *J Urol* 2002;168:2486–9.
- 51 Abdel-Hamid IA. Phosphodiesterase 5 inhibitors in rapid ejaculation: Potential use and possible mechanisms of action. *Drugs* 2004;64:13–26.
- 52 Chen J, Mabjeesh NJ, Matzkin H, Greenstein A. Efficacy of sildenafil as adjuvant therapy to selective serotonin reuptake inhibitor in alleviating premature ejaculation. *Urology* 2003;61:197–200.
- 53 Pryor JL, Althof SE, Steidle C, Miloslavsky M, Kell S. Efficacy and tolerability of dapoxetine in the treatment of premature ejaculation. *J Urol* 2005;173 (suppl):201. Abstract 740.
- 54 Althof SE. Therapeutic weaving: The integration of treatment techniques. In: Levine SB, ed. *Handbook of clinical sexuality for mental health professionals*. New York: Brunner-Routledge; 2003:359–76.
- 55 Althof SE, Leiblum SR, Chevert-Measson M, Hartmann U, Levine SB, McCabe M, Plaut M, Rodrigues O, Wylie K. Psychological and interpersonal dimensions of sexual function and dysfunction. In: Lue TF, Basson R, Rosen RC, et al., eds. *Sexual medicine: Sexual dysfunctions in men and women*. Paris: Health Publications; 2004:73–115.
- 56 Lue TF, Basson R, Rosen R, Giuliano F, Khoury S, Montorsi F, eds. *Sexual medicine: Sexual dysfunctions in men and women*. Paris: Health Publications; 2004.
- 57 Wylie K, Allen P, Hallam-Jones R. An evaluation of a telephone follow-up clinic in urology. *J Sex Med* 2005;2:641.