Premature Ejaculation: A New Approach by James H. Semans

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> "Premature ejaculation is a complaint which the urologist hears from his patient. The internist hears it not uncommonly from a wife. In any event it has offered a problem difficult of solution. Here is a new suggestion for treatment that seems to have merit." [1]

The Journal of Sexual Medicine's first "Classsic Citation" is a five-page article published 51 years ago in which Semans described his stop–start technique to treat premature ejaculation (PE) [1]. In the introduction, Semans pointed out that "premature ejaculation is very undesirable for the husband since it may lead to actual sexual impotence." His procedure for prolonging the neuromuscular reflex was extravaginal stimulation of the erect penis by the partner until the premonitory sensation of ejaculation. Stimulation was then interrupted until the sensation disappeared. Semans recommended that this cycle be repeated in many steps. In addition, the couple was interviewed in the office. At the end of the article, eight successful cases were presented, chosen because of the "adequate follow-up."

At the end of the article, two physicians wrote comments. They stressed the difficulties in treating PE and the importance of ruling out organic causes as "prostatitis." A PubMed review with the words premature ejaculation or rapid ejaculation showed only two articles [2,3] published before Semans' work, confirming the pioneer role of the author.

Sidney Glina, MD
Editor, Classic Citations

This article may be split into four blocks: introduction to the issue; introduction to the technique and its indications and contraindications; clinical cases; and discussion. Therapeutic principles and practices in respect to PE that are still valid nowadays are presented, alongside some other principles and practices that no longer prevail.

The article values a technique for the treatment of PE known as "stop–start," the purpose of which is to prolong the localized neuromuscular reflex responsible for ejaculation. The article ascribes importance to the three criteria currently used in the diagnosis of PE, namely: inability to control ejaculation, short intravaginal latency, and lack of sexual satisfaction [4]. On the other hand, there is no mention of the difference between primary PE (present since the beginning of sex life) and secondary PE (appearing some time after adequate sexual activity), which makes one assume that such a classification was not used at the time.

However, Andrews' comment on how Schapiro [5] treats PE (PE caused by exhaustion and associated with erectile insufficiency, i.e., sexual hypotonus, treatable with stimulants; PE associated with increased tension and emotion, in addition to hypertonus of the sex apparatus, treatable with sedatives) seems to combine erectile dysfunction (ED) and PE as a single diagnostic category with different manifestations.

From such comment, one also notes the incipient use of pharmacological treatment for PE at the time. Indeed, it was only during the past decade that clinicians began to investigate the off-label administration of pharmacological drugs (selective serotonin reuptake inhibitors [SSRIs] and clomipramine) to delay ejaculation [6,7].

Some information in the article attracts attention because it conveys a picture of circumstances still current in today's clinical practice: patients reluctant to admit and treat emotionally originated sexual difficulties; partners often reacting with emotional tension to the lack of control over

ejaculation; and PE may lead to ED after several episodes of lack of control.

Conducts already prescribed at the time and which are still valid nowadays are a good surprise: careful diagnostic interviews and follow-up (alone with the patient, alone with the wife, in the presence of both); detailed history; identification of cases with psychiatric or organic factors, not recommended for treatment of symptoms alone; importance of the cooperation of the wife for the success of the treatment; and importance of medical listening for unsuspected complicating emotional incompatibility between man and wife.

Other diagnostic and therapeutic peculiarities mentioned in the article are noteworthy: there was no concern with distinguishing between cases of exclusive PE for the recommendation of the treatment in question while six out of the eight cases detailed in the article may be considered cases of PE associated with ED (impotence). Only the eighth case characterized exclusive PE, and the fourth case refers mostly to a "difficulty in maintaining erection."

PE causes as noted by Walker and Strauss [8] and reiterated by Ashmore [9] were beginning to be considered, taking into account psychosensorial, neurological, and urethral factors. On the other hand, Andrews [10] suggests that PE is a combination of psychic and somatic factors, "which needs considerable untangling and re-education of the sex patterns."

From the foregoing, one may conclude that the technique proposed by Semans had historical significance because it revealed the importance of including the partner in the treatment of male sexual dysfunctions. Moreover, it proposed a shift in the attention of the premature ejaculator to pleasure, thus reducing the focus on the coitus.

This technique paved the way for the use nowadays of other behavioral approaches as part of PE treatment. It demonstrated that the dysfunction could remit on the basis of its symptoms, i.e., without full knowledge of its etiology. It also encouraged a future with proposals for a more effective treatment.

The multimodal systematization in the current treatment for PE, which combines counseling, medicine, exercises, anesthetic creams, and sex re-education, among other things, was then in its first days. It is curious that the article calls for the awareness of a number of key issues in PE which remain unresolved to this day.

Carmita H.N. Abdo, MD, PhD

Semans was the first to describe a direct, behavioral treatment for PE [1]. He developed what is now known as the stop–start technique. His technique was embedded within a framework of therapy that involved the partner as well as the individual suffering from PE. The first step of Semans' treatment is to interview each partner separately, with the aim of modifying any misconceptions that the partners may have about therapy. Also, the partners are instructed to rest, if either is fatigued, before beginning the therapy. Once "loveplay" is begun, the partners are instructed to touch each other and to progress toward genital stimulation. When the man experiences sensations indicative of forthcoming ejaculation, he informs the partner and stops the partner from stimulating him. Once the subjective sensation of high arousal disappears, stimulation is reintroduced, and again interrupted when similar sensations reappear. This cycle is repeated until the man is able to postpone ejaculation indefinitely. Upon successful postponement of ejaculation with the above instructions, the partners are again interviewed, separately and then together, with the aim of introducing the next step, which is stimulation of the penis with the aid of lubrication. Semans' reasoning behind this is that the "dry" stimulation of the penis initially used has not adequately mimicked the sensations that will be felt once vaginal penetration is reintroduced. Once indefinite postponement of ejaculation is reached using the lubricant, intercourse without PE should be possible, according to Semans.

Semans presented the results of this treatment for eight out of an initial 14 couples. The remaining six were dropped from treatment or could not be followed up. There are several methodological weaknesses in Semans' study [1,11]. For example, there was no control group, and assessment of change relied solely upon the self-report of the husband and the wife, with more weight given to the veracity of the wife's account. Although Semans does not address this issue specifically, he does demonstrate awareness of the role of social pressures (e.g., to report sexual satisfaction rather than dissatisfaction) by recommending the separate assessment of both partners [1,11]. Even with the extensions of Semans' technique, provided by

Wolpe and Lazarus [12] and Masters and Johnson [13], the few controlled studies that have been conducted were not able to demonstrate that these behavioral techniques definitely cured PE [14,15]. Does that mean that we have to conclude that the overall efficacy of these techniques is insufficient to treat PE? The answer is no. That would be a false conclusion. These techniques just have not been investigated yet according to the current standards of evidence-based research, specifically designed to investigate PE.

I personally believe that the rather high dropout rate (45%) in Semans' sample and opposite the very high success rate (97%) in Masters and Johnson's sample [13] may have depended on the type of PE of their patients. The authors did not mention which percentage of their population had lifelong or acquired PE, how frequent these men suffered from PE, and how short their ejaculation time was in most cases of intercourse. We recently proposed the existence of four PE syndromes: lifelong PE, acquired PE, natural variable PE, and premature-like ejaculatory dysfunction [16–18]. Behavioral treatment, for example Semans' stop-start method, along with counseling and even psychotherapy, should be investigated in the latter group of men in particular to see if it is successful in diminishing the complaints of self-experienced PE. This group of men are characterized by subjective experiences of PE while having normal and even long durations of intravaginal ejaculatory latency time (IELT). Such a study should preferably also investigate these behavioral treatments in men with lifelong PE with consistent IELT values of less than 1.5 minute. It is suggested that behavioral treatment will be (more) effective in men with premature-like ejaculatory dysfunction and much less effective in men with lifelong PE with IELT values of less than 1.5 minute. Therefore, although daily SSRI treatment, particularly with 20-mg paroxetine, is most common now to treat PE in general, it might well be that the original behavioral treatment of Semans and its extensions developed by other sexologists, will be efficacious in men suffering from subjective complaints of PE at normal and even long durations of IELT. A comparative study of behavioral treatment in both groups of men is highly recommended and may contribute to better understanding of the efficacy of the stop–start technique originally developed by Semans.

Marcel D. Waldinger, MD, PhD

It is always instructive to reread classic articles, and Dr. James Semans' work entitled "Premature Ejaculation: A New Approach" [1] is no exception. In this article he introduces us to a "localized neuromuscular reflex mechanism to prolong ejaculation," which we now refer to as the stop–start technique. This elegantly simple behavioral exercise revolutionized the treatment of PE.

What you probably did not know was that, in addition to launching the stop–start technique in this brief article, Dr. Semans also recognized the distress experienced by PE patients, detailed the interplay of coexisting male and female sexual problems, and demonstrated the significance of psychological and interpersonal factors in the inception and maintenance of PE. Finally, he emphasized the importance of educating both the patient and the partner. It is amazing that in a mere six pages he touched on the very issues we still struggle with today.

Dr. Semans' treatment consisted of spending 3 hours with the couple: one with the man alone, one with the woman alone, and one with both. What follows are his instructions regarding the man's stimulation. Note that he simultaneously directs the man to stimulate the woman's clitoris while she stimulates his penis. Should the man accidentally ejaculate, he is told to continue stimulating her until "maximum female response is obtained." The woman is told to engage in . . .

> Extravaginal stimulation of the penis during erection until the sensation premonitory to ejaculation is experienced by the patient. This sensation is readily recognizable to him as localized in the glans and corpus spongiosum. Stimulation is then interrupted until the sensation has disappeared. Penile stimulation is repeated until the premonitory sensation returns and then is discontinued again. Subsidence of erection may, or may not occur temporarily. By repeating this procedure the response of ejaculation becomes no longer premature; that is, it can finally be delayed indefinitely until female response is done or is complete. . . .
>
> Next each is told that ejaculation occurs more rapidly with the penis wet than dry. It is necessary therefore to use a bland cream or other means to lubricate the penis while the procedure is repeated. After the penis has been able to tolerate indefinitely stimulation while wet, it can be expected that the moist surface of the vagina will no longer produce premature ejaculation.

Fifteen years later, Masters and Johnson [13] told us that, "Where sexual dysfunction exists, there is no uninvolved partner." Dr. Semans was acutely cognizant of the importance of treating the couple. He wrote, "Her cooperation is often essential and always desirable." The instruction for mutual stimulation of the penis and clitoris sought

to ensure that the partner did not feel used or cheated and that her pleasure was equally important to the man's.

Men with PE are fearful of focusing on their arousal, believing that it will cause them to ejaculate more rapidly [19]. By using distraction or other clever techniques, men ignore/bypass their sensations and are unaware of their level of arousal. It is not surprising that they ejaculate without warning. Men with PE know only two points along the continuum of arousal: little arousal or the point of ejaculatory inevitability. By requiring men to focus on their level of arousal and delaying ejaculation, Dr. Semans provided them with a means of lingering in the mid-range of excitement. With repeated practice and success they gained confidence and were able to overcome their sexual dysfunction.

The stop–start technique remains relevant even in the era of pharmacological treatment of PE. By combining pharmacotherapy with behavioral interventions, men may achieve a better response to combined treatment than simply using the drug alone. Combined therapy may also help some men wean themselves off medication, or use the compound less frequently. Gaining self-efficacy and confidence is the key to successful treatment of PE.

Stanley E. Althof, PhD

Historically, behavioral psychosexual therapy was considered the treatment of choice for men with PE, and the cornerstone of treatment was the Semans' stop–start technique. In his seminal 1956 article, Semans describes a behavioral pacing technique to contain the level of sexual arousal and reports 100% success in a highly selected group of eight patients. His technique involves initial extravaginal progressive masturbation training exercises to familiarize the man with the premonitory sensations of emission and improve sensual awareness and regulation during sexual arousal until ejaculation can be delayed indefinitely before proceeding to sexual intercourse. Masters and Johnson described the similar "squeeze technique", and various other modifications of these two basic techniques have been described by other authors [13].

Semans suggests that PE is due to an abnormally rapid ejaculatory reflex and a failure of the man to pay sufficient attention to preorgasmic levels of sexual tension. Although the latter is true for many men, several authors have subsequently reported that the ejaculatory reflex of men with PE is not rapid by demonstrating that the sacral evoked potential latency of the bulbocavernosus reflex in men with lifelong PE does not differ from age-matched controls [20].

Semans offers little comment on the causality of PE, but does report that the PE of Case 1 was "not organic but physiological and emotional." This assertion has some validity based upon more recent research.

Recent animal and human sexual psychopharmacological studies have attributed a serotonergic basis and possible genetic etiology to PE [21]. Ejaculatory latency time is probably a biological variable, which is genetically determined and may differ between populations and cultures, ranging from extremely rapid through average to slow ejaculation. Hyposensitivity of the 5-HT2C and/or hypersensitivity of the 5-HT1A receptors have been suggested as a possible explanation of lifelong PE [22].

Anxiety has been reported as a cause of PE by multiple authors, and is entrenched in the folklore of sexual medicine as the most likely cause of PE despite scant empirical research evidence to support any causal role [5]. Although the causal link between anxiety and PE is speculative and is not supported by any empirical evidence and is in fact contrary to empirical evidence from some researchers, there is limited correlational evidence to suggest that acquired PE may be due to high levels of sexual anxiety [23]. As such, Semans' assertion that PE may be "physiological" and "emotional" has some support in subsequent research.

Semans reports the presence of comorbid ED in men with PE and the importance of an "adequate history" in distinguishing PE from "organic impotence." It is now well recognized that deterioration of a relationship as a result of PE may lead to the mergence of secondary ED. Recent data demonstrate that almost half of men with ED also experience PE [24]. Men with early ED may intentionally "rush" sexual intercourse to prevent premature loss of their erection and ejaculate with a brief latency. This may be compounded by the presence of high levels of performance anxiety related to their ED that serves to only shorten their IELT.

Semans' stop–start technique is short-term, directive, and sequential, and involves the partner

in both assessment and therapy. As such, it embodies many of the basic tenets of modern sex therapy by assisting the patient in achieving confidence in his sexual performance, reduce performance anxiety, and resolve relationship issues by improving communication between partners.

Although Semans and others report high short-term success rates, there are no randomized, controlled studies assessing the efficacy of behavioral-psychological therapy on men with PE who fulfill any of the criteria of evidence-based medicine, and no convincing long-term treatment outcome data [25]. As a result, some patients may require additional therapy sessions as a relapse-prevention strategy.

Modern sex therapy has evolved far beyond Semans' initial behavioral approach. Barriers to achieving successful sexual activity can be targeted by using focused psychosexual-educational therapies or "sex coaching." In addition, behavioral therapy can be combined with pharmacotherapy into an integrated treatment program, which may improve both short- and long-term response rates and reduce relapse rates [4].

Notwithstanding this, Semans' contribution to sexual medicine was both insightful and significant.

Chris Mc Mahon, MD

The correlation between ejaculatory disorders, mainly represented by PE, and impairment of sexual health continues to represent a trigger point for debate. The cornerstone article by Semans, who suggested the stop–start technique to treat PE patients, still provides several points of discussion, with an interesting link to the most modern everyday "sexual medicine" clinical practice.

PE: a couple's compliant deserving a couple's approach. PE first raised the point of sexual disorders as a couple's issue, not only a man's problem. Semans pictured the overview of his epoch when the concept of a couple's sexual well-being began to be the focus. Since that initial understanding, several other authors have taken sexual medicine research toward the current concept of "ecology" of a couple's sexuality, in which sexual satisfaction is represented by the patient and his partner's satisfaction. The wife's cooperation, mainly in either revealing the relationship's aspects of potential incompatibility or understanding treatment modalities, was described not only as well accepted but as often essential "*in the successful management*" of sexual complaints. At present, the partner is "the more reliable source of information concerning her husband's progress;" indeed, regardless of the specific type of dysfunction, it has been emphasized that a couple's approach is mandatory when treating patients suffering from sexual disorders.

The "undesirability" of PE for the man and the reported need for continued clitoral stimulation until the woman's orgasm even though her man's ejaculation already occurred, with the specific aim to preserve the partner's cooperation, as underlined by Semans in his original work, described the concept of a couple's approach at its beginning. Sexual medicine was still some time from appreciating that a man's treatment may lead to improvement of women's sexual health per se [26].

Stop–Start Technique. Various behavioral treatments have been developed to increase control over the moment of ejaculation, including the Semans' *stop–start* approach, and the subsequent "squeeze method" developed by Masters and Johnson, mostly recognized and both of historical and practical importance [1,13]. Both of these treatments have been shown to be effective in a number of cases. However, both need interruption of sexual interaction once initiated, which, for most couples unwilling to stop their sexual foreplay, is undesirable or, feared by those who shrink from potential secondary impairment of their erectile function.

Rereading the original article of Semans is a great pleasure. I found his suggestion of sleeping for a brief period of time before starting or during sexual activity "if fatigue is present in either partner . . ." to be delicate and poetic, the idea being that fatigue was potentially responsible for lack of cooperation between partners. Semans' suggestion of a sort of "schematic" approach to petting and coital thrusting with reciprocal information by the partners about the stage of their own sexual excitement in order to stop either himself or herself and preventing ejaculation appears too "didactic" and difficult to practice once the man is sexually aroused and with desire to "have sex." This is more difficult in a modern "biology-driven" approach to sexual medicine, when getting a safe and effective pill for having sex might reduce the naturalness of sexuality [27].

PE is an "organic" disorder! Interestingly enough, either organic or psychiatric etiologic factors comprised contraindication for Semans' method. Most recent taxonomy functionally classified PE into a syndrome, distinguishing a lifelong, an acquired,

and a "natural variable" disorder of ejaculation [16,28].

Either a neurobiological or a psychological pathology has been reported for the first two types, whereas a normal variability of sexual performance was suggested for the last, in which prevalence is probably much higher. Recent developments have clearly underlined that, although mediated by a spinal generator, ejaculation is subject to descending supraspinal modulation from several brain regions [29]. Serotonin is involved in ejaculatory control, with its ejaculation-retarding effects likely to be attributable to activation of spinal and supraspinal receptors. PE may represent an alteration of the descending neurobiological pathways leading to the loss of an inhibitory control of the ejaculatory phenomenon itself. Although behavioral approaches might have a side-role in treating PE patients, in a "biology-driven" approach to this sexual disorder physicians may count on a larger armamentarium, including SSRIs effective in delaying ejaculation in men.

Andrea Salonia, *MD*

The late James H. Semans, MD, was a remarkable urologist and individual. Dr. Semans was an early member of the Division of Urology along with Drs. Edward Alyea and John Dees. Together these three individuals began an academic program in Urology at a new hospital at Duke University located in the town of Durham, North Carolina, in the southern portion of the United States. The cultural climate of the southern United States in the immediate period after World War II was quite reserved and conservative, not in a political sense, but in a social sense. Deeply religious and very homogeneous, the south was not progressive in any sense, particularly when it came to sexual matters, a fact that makes Dr. Semans' classic article on PE even more remarkable.

This article does not represent an early breakthrough in our understanding of the physiology of erection or ejaculation. The article is rather the first major open discussion of the behavioral issues surrounding sexual dysfunction to appear in the literature to my knowledge. Alfred Kinsey's report on human sexuality appeared 8 years earlier, but this was largely a population-based epidemiological study of sexual behavior, and was largely devoid of any therapeutic recommendations. This article on PE is an observational series of cases, each discussed individually, which together form the basis for a recommended technique to decrease the stimulation leading to and retard ejaculation.

The article is remarkable for its prose, again reflective of the times and mores of the American south in the 1950s. Patients and partners are not discussed; Dr. Semans refers to husbands and wives. The risk factors for ED are presented; absent the vascular risk factors that we know today are the most common reason for the development and progression of ED. There is a brief discussion of the reasons for female sexual dysfunction in Case 1 and a remarkable example of the basic lack of knowledge of sexual function on the part of the patients. A reading of the case reports leaves one with the impression of a sensitive sympathetic physician/behavioral scientist learning from each observation.

Our knowledge of the physiology of ejaculation has advanced over the past 50 years, although not as much as we would like. Our approach to the treatment of PE involves more options than available to James Semans, although no pharmacologic agent has been approved by any governmental regulatory authority for the treatment of this condition at the time I write these words. The Semans technique for the treatment of PE remains valuable as an adjunct to the treatment of men with this condition today.

Craig Donatucci, *MD*

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