REVIEW ARTICLE

PREMATURE EJACULATION: CURRENT STATUS AND NEW DEVELOPMENT

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Abstract:

Objective: *To assess the articles published on current and recent advanced treatments of premature ejaculation (PE) and assist clinicians to select the effective management of PE by increasing knowledge and awareness of the outcomes associated with current medical and surgical treatment options.*

Methods*: An Online literature search was conducted to identify relevant, peer-reviewed, and clinical and review articles published related to current and recent advanced treatments of premature ejaculation (PE). Search terms for this non-systematic review included 'premature ejaculation', 'current treatment and outcome', 'new development of Premature Ejaculation'. Search terms were separately searched and in combination. Case studies and editorials were excluded. Primary manuscripts and reviews were included and references of articles of interest were reviewed and key references were obtained.*

Result: *There is no established treatment, validated screening instrument or diagnostic criteria for PE. The pathophysiology and etiology of PE are not well known. The negligence of patients and physicians to talk about PE and the lack of knowledge are the main barrier for the treatment of PE. Currently there are several treatment options including psychological counseling, behavioral therapy, and pharmacotherapy like antidepressants, topical anesthetics or phosphodiesterase-5 inhibitor. However, surgical treatment remains on trial, specifically dorsal nerve division.*

Key words: *Premature ejaculation, Orgasm, Emission, Male sexual dysfunction, IELT.*

Bangladesh J. Urol. 2017; 20(1): 42-45

Introduction:

Premature ejaculation is a common male sexual disorder.

Premature Ejaculation may be defined as ejaculation that occurs sooner than desired, either before or shortly after penetration causing distress to either one or both partners[1].

The panel defined PE as having three components-

1. Ejaculation that always or nearly always occurs before or within about 1 minute of vaginal penetration,
2. Inability to delay ejaculation on all or nearly all vaginal penetrations,
3. Negative personal consequences such as distress, bother, frustrations, and/or the avoidance of sexual intimacy.

Premature Ejaculation has been sub classified into two forms: Primary (Lifelong) form that begins when a male first becomes sexually active and secondary (acquired) form[2,3]. Two further types are proposed but not widely accepted-Normal variable and Premature like ejaculation[4].

Epidemiology:

Premature ejaculation is the most prevalent sexual dysfunction in every country. The national Health and

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social life Survey indicates that one of every five U.S men between the ages of 18 and 59 may have the problem.A large survey that investigated various aspects of sex and relationships among 27500 men aged 40-80 years. Despite some methodological bias, a prevalence of more than 21% seems a realistic figure for premature ejaculation[5, 6, 7].

Social Impaction:

PE burdens the patient on two different levels: emotional and relational[8]. The PEPA (Premature Ejaculation Prevalence and Attitudes) survey showed a greater percentage of men with PE reported anxiety, depression, and psychological distress compared with men who did not have PE[9].

Physiology of Ejaculation:

Ejaculation is a reflex, which requires a complex interplay among somatic, sympathetic and parasympathetic pathways involving predominantly central dopaminergic and serotonergic neurons. In antegrade ejaculation, two basic phases are involved: emission and expulsion. Emission, as the first phase of ejaculation, is a sympathetic spinal cord reflex and defined as the deposition of seminal fluid into the posterior urethra. Expulsion is due to the combined action of sympathetic and somatic pathways. An antegrade ejaculation requires a synchronized interplay between per urethral muscle contractions and bladder neck closure, contemporaneous with the relaxation of the external urinary sphincter.

Aetiopathogenesis:

The common pathway in the genesis of PE appears to be either a hyposensitivity of 5-HT_{2c} receptors or a hypersensitivity of the 5-HT_{1A} receptors[10]. A number of potential explanations have been postulated for the genesis of PE including (1) genetic etiologies, (2) psychological causes, (3) hormonal aberrations, (4) penile sensory changes, (5) chronic prostatitis[11]. During early sexual experiences, PE is frequent and might even be considered normal. In men with PE, they might not allow themselves to receive the sensory feedback of those sensations occurring immediately before orgasm, which would enable the ejaculatory reflex to be brought under voluntary control. Neurobiological phenomenon is due to chronic (genetic or acquired) central serotonergic hypo activity.

Evaluation:

Premature Ejaculation is a self reported diagnosis. The diagnosis is based on sexual history alone.

SEXUAL HISTORY AND PHYSICAL EXAMINATION-

The AUA recommends the following be taken into consideration in the history-

- Ø The duration and frequency of PE
- Ø The rate of occurrence of PE with some or all sexual encounters and partners.
- Ø The degree to which sexual stimuli cause PE, and
- Ø The nature and frequency of sexual activity including foreplay, masturbation and intercourse.

Treatment

The AUA guideline states that "patient and partner satisfaction is the primary target outcome for the treatment of PE[12]. Relationship satisfaction is also an important goal[13].

Psychological therapy:

Psychological therapy is a way to address the negative feelings and emotions that lead to problems with sexual relationship. Psychological therapy can help to become less nervous about sexual performance and understanding to improve partner's satisfaction.

Behavioral Therapy:

It is a well recognized treatment for PE. Success rate is about 45-65%[14]. There are two techniques- "start-stop" and "squeeze" technique.

In "Start-stop" technique, partner stimulating the man's penis until he has the sensation of almost climaxing, at which time stimulation is abruptly stopped until this feeling disappeared. Then repeat this cycle until the ejaculation can be controlled voluntarily[11].

In "Squeeze" technique the partner is advised to squeeze the penile stimulation at the time of inevitable orgasm, then the female partner restarts the stimulation at least 30 seconds later[11].

Pharmacological Treatments:

To date only a few studies of the pharmacological treatment of PE meet the highest level of evidence based medicine criterion[15]. No pharmacologic therapy has been approved by the U.S.F.D.A, but in Europe a novel SSRI (Dapoxetin) has been approved[16].

Selective Serotonin Reuptake Inhibitor:

SSRI antidepressants such as fluoxetine, paroxetine, dapoxetine and sertraline are used for PE based on the observation that they delayed the ejaculation when used as therapy for depression[17-19]. Prolongation of IELT is

seen as early as a few days after treatment initiation but is maximized and plateaus at 2-4 weeks with an average of a twofold to eightfold increase in IELT depending on the agent[20].Numerous groups have investigated the efficacy of SSRIs given on a chronic daily schedule for PE and a recent meta-analysis showed rank order of efficacy of IELT increase was paroxetine, sertraline, clomipramine, fluoxetine and placebo[21]. Chronic Vs daily dosing was investigated with fluoxetine with the goal of increasing convenience[22]. Although the 2 schedules had similar efficacy, the once daily schedule had an onset of effect of 4 weeks vs. 6 weeks for the once weekly schedule[23]. Common side effects with each were nausea, insomnia and headache.

Clomipramine:

It is TCA that inhibits the uptake of noradrenaline and 5-HT by adrenergic and 5-HT neurons. On demand dose 25 mg, 12 to 24 hours before intercourse. A meta-analysis has shown that clomipramin increase 4 fold IELT[24].

PDE-5 inhibitors:

PDE-5 inhibitors used alone[25] or in combination with SSRIs have been reported to improve ejaculatory latency in men with PE[26-27].

Tramadol:

The mechanism of action of tramadol in PE is not fully understood. But several studies showed tramadol 50 mg taken 2 hours before sexual intercourse significantly increase delay time[28].

Topical agents: Topical anesthetics are available in cream, ointment or spray formulations and are used based on the theory that men with PE are hypersensitive to penile stimulation[29].Drawbacks of topical anesthetics are that they can be messy, interfere with spontaneity and cause numbness in the man and his partner.

Conclusion:

The stigma associated with PE are the problems of its many definitions, incompletely documented prevalence by age, ethnicity and culture, incompletely understood pathophysiology and etiology, and the lack of standardized clinical end point measures, validated outcomes measurement instruments and FDA approved medications contribute to under diagnosis and under treatment. A universal definition and diagnostic criteria for PE are needed. Medications specifically for the treatment of PE should be evaluated in large scale clinical trials in men.

References:

1. Gajjala SR, Khalid A. Premature ejaculation: A review. Indian J sex transm dis: 2014 Jul-Dec, 35(2)
2. Godpodinoff ML. Premature ejaculation: Clinical subgroups and etiology. J Sex Ther, 15: 130, 1989.
3. Williams W. Secondary premature ejaculation, Aust NZ J Psychiatry. 18:333,1984.
4. Waldinger MD. Premature ejaculation: state of the art. Urol clin North Am 2007; 34:591-99
5. Asch C, Himmel W, Ittner E, Kochen MM. Sexual problems of male patients in family practice. J FamPrac, 50:773, 2001.
6. Frank E, Anderson C. and Rubinstein D: Frequency of sexual dysfunction in “normal” couples. N Engl J Med, 299:111, 1978.
7. Melz M E, Pryor JL, Nesvacil LJ, Abuzzahab FS, Koznar J. Premature ejaculation: a psychophysiological review, J Sex Marital Ther, 23:3, 1997.
8. Symonds T, Roblin D, Hart K, Althof S. How does premature ejaculation impact a man’s life? J Sex Marital Ther, 29:361, 2003.
9. McMahon CG, Althof S,Waldinger MD, Porst H. et al. An evidence based definition of lifelong premature ejaculation: report of the ISSM Ad hoc committee for the definition of PE: BJU International , Aug 2008.V-102 , Issue-3, P-338-350.
10. Muhal JP. Premature ejaculation; Campbell-Walsh Urology, 10th edition, Elsevier Saunders, 2012, P-773.
11. Alan JW. Campbell-Walsh Urology, 10th edition, Elsevier Saunders, 2012,P-775.
12. Montague DK, Jarrow J, Broderick GA, Dmochowski RR, Heaton JPW, Lue, T.F. et al : AUA guideline on the pharmacologic management of PE. J. Urol, 172:290,2004.
13. Metz ME, McCarthy, B.W.: Coping with Premature ejaculation. Oakland, California: New Harbinger publications, p-1;2003.
14. LA DeAmicis et al .Arch sex behav 14(6), 467-489, Dec 1985.
15. Waldinger MD. Lifelong premature ejaculation: from authority based to evidence-based medicine. BJU Int,93:201,2004.

16. Pryor JI, Althof SE, Steidle C. et al. Efficacy and tolerability of dapoxetine in treatment of PE: an integrated analysis of two double-blind, randomized controlled trials. Lancet 2006; 368:929.

17. Stone KJ, Viera AJ. Parman CL. Off-label applications for SSRIs. Am Fam Physician, 68:498,2003.

18. Rosen RC, Lane RM, Menza M. Effects of SSRIs on sexual function: a critical review. J ClinPsychopharmacol, 19:67,1999.

19. Waldinger MD, Berendsen HH, Block BF, Oliver B, Holstege G. Premature ejacultion and serotonergic antidepressants-induced delayed ejaculation: the involvement of the serotonergic system. Behav Brain Res, 92: 111,1998.

20. McMahon CG, Althof S, Waldinger MD, Porst H,. et al. An evidence based definition of lifelong premature ejaculation: report of the ISSM Ad hoc committee for the definition of PE: Journal of sex medicine 2008; 5: 1590-606.

21. Waldinger MD, Zwinderman AH, Schweizer DH, Olivier B. Relevance of metholdological design for the interpretation of efficacy of drug treatment of PE: a systematic review and meta analysis. Int J Impot Res, 16:369,2004.

22. Manasia P, Pomerol J, Ribe N, Gutierrez del pozo R, Alcover Garcia J. Comparison of the efficacy and safety of 90 mg Vs 20 mg fluoxetine in the treatment of PE. J Urol, 170:164,2003.

23. Althof SE. Prevalence, charasteristics and implications of premature ejaculation. J. Urol .AUA. vol-175, 842-848,March 2006.

24. Haensel SM,Klen TM, Hop WC, Slob AK. Fluoxetine and PE: a double blind,cross over, placebo controlled study: J. Clin psychopharmacol,1998 Feb:18(1):72-7.

25. Abdel-Hamid, I.A. Phosphodiesterase 5 inhibitors in PE: potential use and possible mechanisms of action. Drugs, 64:13, 2004.

26. Chen J, Mabjeesh NJ, Matzkin H, Greenstein A. Efficacy of sildenafil as adjuvant therapy to SSRI in alleviating PE. Urology,61: 197,2003.

27. Salonia A, Maga T, Colombo R, Scattoni V. et al. A prospective study comparing paroxetine alone Vs Paroxetine plus sildenafil in patients with PE. J Urol, 168: 2486,2002.

28. Safarinejad MR, Hosseini SY. safety and efficacy of treatment of PE with tramadol : a double blind, placebo controlled, fixed dose, randomized study. J clinpsychopharmacol, Feb2006, 26(1):27-31.

29. Xin ZC, Choi YD, Lee SH, Choi HK. Efficacy of a topical agent SS-Cream in the treatment of PE: preliminery clinical studies, Yonsei Med J. 38: 91, 1997.