

## Short Communication

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# Epidemiology of Premature Ejaculation and its Impact on Quality of Life

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### ABSTRACT

Premature ejaculation (PE) is one of the major sexual problem among men. The prevalence varies worldwide ranging from 4 to 66% according to various studies. The aetiology and pathophysiology of PE are still poorly understood. The associated risk factors for PE varies from folate deficiency, metabolic syndrome/diabetes, neurobiological and genetic factors/genetic predisposition, neurological disorders, recreational drugs and alcohol, chronic prostatitis/chronic pelvic pain syndrome, thyroid disorder, emotional problem/depression/stress/anxiety, history of traumatic sexual experiences/conditioning, erectile dysfunction (ED), low sexual intercourse frequency. PE has a great impact on the men's quality of life (QoL) where it can lead to embarrassment, frustration, feeling of incompetence, depression and sexual dissatisfaction. The management of PE varies from non-pharmacological therapy including counselling; and pharmacological therapy. PE does not just affect the man but also his female partner. As such, it is important that women understand the issue and provide adequate moral support to the male partner to address the issue together.

**KEY WORDS:** Premature ejaculation (PE); Risk factors; Prevalence; Quality of life (QoL); Management.

**ABBREVIATIONS:** PE: Premature Ejaculation; GSSAB: Global Study of Sexual Attitudes and Behaviors; TBI: Traumatic Brain Injury; IELT: Intravaginal Ejaculation Latency Time; IIEF-5: International Index of Erectile Function-5; TSH: Thyroid Stimulating Hormone; DE: Delayed Ejaculation; ED: Erectile Dysfunction; EF: Erectile Function.

### INTRODUCTION

Premature ejaculation (PE) is defined as ejaculation which always or nearly always occurs prior to or within about one minute of vaginal penetration from the first sexual experience (lifelong premature ejaculation), OR, a clinically significant and bothersome reduction in latency time, often to about three minutes or less (acquired premature ejaculation); AND the inability to delay ejaculation on all or nearly all vaginal penetrations; AND negative personal consequences, such as distress, bother, frustration and/or the avoidance of sexual intimacy.<sup>1</sup>

The prevalence of PE varies worldwide and it is estimated to be vary from 1%-30%. The Global Study of Sexual Attitudes and Behaviors (GSSAB) which is a large survey on prevalence of sexual dysfunction in 29 countries indicated that rapid ejaculation is the main complaint. It was found that the prevalence of rapid ejaculation were more than 20% in Europe, South America and Asia.<sup>2</sup>

The prevalence could be higher as many men do not want to seek help or discuss the problem which may affect their self-esteem.<sup>3,4</sup> Recently, a standardization on the evidence-based definition was done for PE and a set of operational criteria was established in 2014.<sup>5</sup> Prior to this definition, the prevalence rates of PE were found to vary ranging from 3% to 84%.<sup>5,6</sup> The new definition of PE is attempt to overcome the prevalence rates disparity amongst the existing studies.

## RISK FACTORS OF PREMATURE EJACULATION (PE)

### Biological Causes

The aetiology and pathophysiology of PE are poorly understood. Among the risk factors are genetic predisposition, obesity, depression, stress, anxiety, traumatic experiences, recreational drugs and alcohol, prostatitis, neurological causes, thyroid disorders, varicocele, erectile dysfunction, relationship problem, early sexual experience, sexual abuse.

### Folate Deficiency

Studies have indicated that there is a correlation between serum folic acid and International Index of Erectile Function-5 (IIEF-5) scores ( $r=0.589$ ,  $p<0.01$ ) and intravaginal ejaculation latency time (IELT) ( $r=0.445$ ,  $p<0.01$ ) and this was due to the effect of folic acid on the nitric oxide metabolism, 5-hydroxytryptamine, Hcys.<sup>7</sup> In another study, it was found that the concentration of folic acid and IELT in the PE group was significantly lower than the normal group and the concentration of folic acid was moderately correlated with IELT ( $r=0.494$ ,  $p<0.05$ ).<sup>8</sup>

### Neurobiological and Genetic Factors/Genetic Predisposition

In 1998, it was suggested that men with lifelong PE, their IELT is affected by genetic and neurobiological factors. There is no real concrete evidence to suggest that the first-degree relative of a man with lifelong PE is a risk factor for PE although familial occurrence of PE has been proposed in 1943 and even investigated in a family study in 1998.<sup>9</sup>

### Metabolic Syndrome/Diabetes

Studies have shown that there is an association between metabolic syndrome and PE. Bolat et al<sup>10</sup> found that metabolic syndrome components were found significantly predictive of PE after controlling for age and total testosterone.

PE is significantly associated with diabetes where men with PE has higher fasting blood glucose than the men without PE. Higher prevalence of PE was noted in men with diabetes.<sup>11</sup> Similarly, the PE incidence were reported high among diabetics. The associations between PE and diabetes may be due to neurologic, neurotransmitter and psychologic dysfunctions.<sup>12</sup>

The microvascular complications such as diabetic neuropathy from diabetes may contribute to PE where the ejaculation largely depend on autonomous nervous system, its central, and peripheral neurotransmitters.<sup>13</sup> The impairment of nitric oxide metabolism, inhibited serotonergic activity and activated adrenergic system may contribute to the ejaculation reduction time.<sup>14</sup>

Visceral obesity, high plasma leptin concentrations, insulin resistance, baroreflex impairment, activation of the RAAS

(renin–angiotensin–aldosterone system), and the oxidative stress on sympathetic nervous system may lead to overactivity and increasing of blood pressure which may lead to increment of blood pressure in the prostatic urethra of the PE subjects.<sup>15</sup>

### Neurological Disorders

Some studies have indicated that there is a possibility of association between neurological disorders and PE. Some of the neurological disorders such as multiple sclerosis, cerebrovascular disease, traumatic brain injury (TBI), Parkinson's disease etc., were found to be associated or linked to PE. Nevertheless, there was a lack in findings on the strength of association of these neurological disorders. The effect could be from the neurophysiologic mechanisms or by endocrine, metabolic or psychological changes.<sup>16</sup>

### Recreational Drugs and Alcohol

Illegal recreational drugs such as amphetamines and cocaine are found to be associated with PE. Subjects who used amphetamine can have prolonged IELT or shortened IELT.<sup>17</sup>

Most studies have found no association between alcohol consumption and PE. However, fewer studies have shown an association between alcohol and PE. PE was reported in 37.5% subjects (36/96). From this number, 27 (28.12%) experienced ejaculation within 60 seconds.<sup>18</sup> In another study, PE was found to be 4%.<sup>19</sup>

### Chronic Prostatitis/Chronic Pelvic Pain Syndrome

Prostate inflammation/chronic bacterial prostatitis were more commonly found in men with PE.<sup>20</sup> Studies have shown that there is a relationship between PE and chronic prostatitis/chronic pelvic pain syndrome. For chronic prostatitis, there is a correlation between prostatitis pain score and PE in crude analysis and after adjusted for metabolic syndrome status, testosterone level, IIEF score and age. Likewise for chronic pelvic pain, the odds ratio (OR) for PE is significantly increased in relation to the severity of pelvic pain in crude and adjusted analysis.<sup>21</sup>

### Thyroid Disorder

Studies have shown there is a correlation between serum thyroid stimulating hormone (TSH) and IELT in patients with hyperthyroidism. Following hyperthyroidism treatment, there were significant improvement in IELT once the patients achieved euthyroidism.<sup>22</sup>

Thyroid disorder were found to be associated with delayed ejaculation (DE), sexual desire, PE and erectile dysfunction (ED). In a study by Carani et al., 2005 in hyperthyroid men; DE, sexual desire (libido), ED and PE were 2.9%, 17.6%, 14.7%, and 50%, while in hypothyroid men, the prevalence of sexual desire (libido), DE, and ED were 64.3% while PE was

7.1%.<sup>23</sup> In hyperthyroid subjects, after normalization of thyroid hormone, the PE prevalence was reduced from 50 to 15%, and improvement in erectile function (EF) and intercourse satisfaction (IS). In hypothyroid men, improvement were seen in EF, libido, intercourse satisfaction but decline in IELT.

#### Emotional Problem/Depression/Stress/Anxiety

Depression is associated with PE duration.<sup>24</sup> Psychological factors which were derived due to the complications of diabetes and its treatment effect may also contribute to performance anxiety which lead to PE. Generalized clinical anxiety was found to be predictive to PE.<sup>25</sup> Knowing the difficulties in achieving erection due to diabetes, the person may quickly complete the task by having a quick intercourse.

#### History of Traumatic Sexual Experiences/Conditioning

Frequent masturbating, improper masturbation and learning how to ejaculate quickly to avoid from being caught masturbating by family members/friends may lead to PE. Apart from that, the individual who achieved climax in a non-ideal condition such as not using any form of lubricant when masturbating to achieve climax, rubbing on the pillow/bed sheet/female undergarments will alleviate the sensitivity of the skin when the individual is having sexual intercourse with his partner where the moisture environment in the vagina will lead to fast ejaculation.

#### Erectile Dysfunction

Men who are anxious and worry of maintaining an erection during coital, may quickly rush to ejaculate. This habit which is difficult to change if continue will lead to PE. It was noted that men with PE is also associated with an increase risk in ED. In men with PE, the risk of getting ED is higher in older individuals, lower education level and unstable relationship.

Few studies have confirmed that ED and PE are reciprocal. When a man attempt to achieve an erection *via* excitation, it may lead to PE.<sup>26,27</sup> Likewise, when men trying to control his ejaculation, it will reduce the excitation which can lead to ED.

#### Low Sexual Intercourse Frequency

Men who suffered PE have lowered frequency of sexual intercourse.<sup>28,29</sup> Men who have low frequencies of sexual activity tend to get more excited and aroused, which leads to performance anxiety. Some studies previously postulated that low frequency of sexual intercourse resulted men unable to practice to control their ejaculation.<sup>30</sup>

#### Impact of PE on Quality of Life

Some studies have shown anxiety is increase in men with PE especially anxiety which is related to sexual relations.<sup>31,32</sup> Anxiety may have bilateral relationship with PE where anxiety may

had contributed to PE or PE causes the increase in anxiety. Self-esteem and self-image may have been affected in men with PE.

Most men would like to achieve long duration of ejaculatory control and many attain sexual satisfaction achievements if they are able to drive their partner to achieve orgasm *via* vaginal penetration.<sup>33</sup>

PE can have deleterious effects on men such as embarrassment, frustration, feeling of incompetence, etc.<sup>34</sup> Most men are embarrassed by their PE condition and prefer not to talk about it. PE can pose detrimental impact on a men's life and his relationships with his partner. The men can feel inadequate, depressed, anxious, angry, have low self-esteem and will eventually lead to marital problem.

Studies have shown that men who suffer PE tend to have lower intimacy levels compare to those men without PE. There is a lack of intimacy between the couple when the man suffers from PE. It affects the emotion, intellectual and social aspects of their life.<sup>35</sup> Studies have shown that men with PE have dissatisfaction during sexual intercourse and suffer personal distress and have interpersonal difficulty.<sup>36-38</sup>

PE can have a huge impact on the couple. The man may feel tensed and unable to enjoy intercourse, he becomes jealous and feels useless, has decreased interest in sex, and feels unsatisfied with his sexual life and his sexual relationship with the partner. All this leads to frustration and disappointment and the female partner may feel equally frustrated and sexually dissatisfied (low sexual satisfaction). This feeling of sexual dissatisfaction can be detrimental to their relationship as it can lead to strain in the relationship and eventually lead to separation. In order to avoid humiliation and/or embarrassment for not being able to satisfy their partner, some men would breakup with their partners or not proceed with their current relationship.<sup>32</sup>

PE not only contributes to the sexual dissatisfaction but also to overall sexual function such as less orgasm enjoyment and difficulties of getting aroused. However, in some men, although PE contributing to the diminished sexual satisfaction, nevertheless, they are satisfied and happy with their current overall relationship with their partner, as this inadequacy has little or no impact on their self-esteem and quality of life (QoL). Likewise, they are not appear to be affected.

PE has a greater negative impact than ED. ED is perceived by some women as a medical problem and it is not the men's fault. In the end, both of them are unable to enjoy sex. On the other hand, PE is perceived as being selfish because the man is able to penetrate the partner and reach his climax (ejaculation) where else the woman, is unable to enjoy it.<sup>33</sup>

The role of a woman in dealing with PE is important. Some women may understand of the men condition, commu-

nicate with the partner to seek treatment while some may feel frustrated and angry. It is important for the women to understand her partner and try to help her partner as much as she can.

Men may perceive that women always want or wish to achieve orgasm through sexual intercourse. But the women may think reaching orgasm or not via penetration is unimportant because there are other ways to achieve sexual satisfaction. In other words for some women, sex through penetration is not the only way to attain sexual satisfaction. Hugging, kissing, touching, stroking etc., can help some women reach the climax. If the female partner insists on having satisfaction or achieving climax/orgasm only via penetration, the male partner can perform the next sexual intercourse after an hour or two following the first 'unsuccessful' attempt. Usually IELT would be prolonged during the second attempt.

#### Treatment for PE

If PE is due to medical condition, treatment has to be focussed on improving the underlying medical condition such as angina or erectile dysfunction (ED). Men suffering from PE should consult with psychiatrist or sex therapist if the underlying factors are found to be psychogenic and seek help from a urologist or primary care physician if it is due to physical factors.

The management of PE can be categorised into non-pharmacological therapy and pharmacological therapy. Non-pharmacological therapy includes the behavioural therapy 'stop-start strategy' (Master and Johnson technique),<sup>39</sup> reducing the performance pressure on the male partner, attempting second time sexual intercourse, psychotherapy (psychosexual therapy and relationship counselling).

The pharmacotherapy on the other hand, includes SSRIs (fluoxetine, fluvoxamine, paroxetine, sertraline),<sup>40</sup> escitalopram,<sup>41</sup> citalopram,<sup>42</sup> dapoxetine<sup>43</sup>; tricyclic antidepressants (clomipramine)<sup>44</sup>; phosphodiesterase type 5 (PDE 5) inhibitor (sildenafil,<sup>45</sup> vardenafil,<sup>46</sup> tadalafil<sup>47</sup>), desensitizing agents/local anaesthetic agents such as SS Cream,<sup>48</sup> benzocaine,<sup>49</sup> prilocaine-lidocaine cream<sup>50</sup> and opioid analgesic (tramadol).<sup>51</sup> Alpha-blockers such as terazosin is also found to be effective for PE treatment in patients with lower urinary tract symptoms (LUTS).<sup>52</sup>

#### CONCLUSION

In conclusion, PE is a serious male sexual dysfunction apart from ED. There are many men who suffer this condition in silence and many cases are still unreported. It affects all age group whether young or old. PE does matter to men because it causes men to be unhappy, depressed and frustrated. PE not only affects men but also to their partner as well. Men should seek counselling and treatment for their PE as there are medical treatment available which can help to overcome the problem. At the same time, the female partner needs to understand and help her partner

by providing the necessary moral support.

#### CONFLICTS OF INTEREST

The author declare no conflicts of interest.

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