On-Demand Treatment of Premature Ejaculation with Citalopram: A Randomized Double-Blind Study

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Abstract- As the most common male sexual disorder premature ejaculation (PE), also referred to as early ejaculation (EE) or rapid ejaculation (RE), affects 30%-40% of sexually active men. Despite the limited number of available studies comparing the efficacy of selective serotonin re-uptake inhibitors (SSRI) they have been thought to have beneficial effects for the treatment of patients with PE. In the present study, we assessed the efficacy of on-demand use of citalopram, in the treatment of premature ejaculation. A randomized double blind study of fixed dose on-demand use of citalopram was performed in Roozbeh Psychiatry Hospital, Tehran University of Medical Sciences. The sample was consisted of 80 married patients diagnosed with PE according to Diagnostic and Statistical Manual of Mental Disorders. The patients were randomly assigned to two groups: group 1 consisting of 42 patients received 20mg citalopram, and group 2 consisting of 38 patients received placebo four hours before intercourse for a 4-week treatment course. The effects of drug on the ejaculatory function in each group were assessed by the intravaginal ejaculation latency time (IELT), and the Chinese Index of Premature Ejaculation (CIPE) before and at the end of treatment course. The mean IELT increased from 66.78±36.94 to 80.85±43.05 seconds in group 1 and from 63.44±33.16 to 65.71±34.26 seconds in group 2 (P = 0.000). Mean CIPE score increased 1.14±1.04 and 0.52±0.50 in group 1 and 2 respectively (P = 0.002). The patients treated with on demand citalopram showed significantly greater improvement in IELT and CIPE score compared to the patients receiving placebo. It seems that citalopram may be an effective treatment of premature ejaculation with on-demand usage. However further studies are warranted.

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Key words: SSRI, citalopram, placebo, premature ejaculation

Introduction

As the most common male sexual disorder(1-2) premature ejaculation (PE), also referred to as early ejaculation (EE) or rapid ejaculation (RE), affects 30%-40% of sexually active men (1-3), perhaps as many as 75% of men at some points in their lives (4). PE has been defined as uncontrolled ejaculation whose essential feature is the recurrent or persistent orgasm with minimal sexual stimulation before or after penetration and before the person desires it (5). Different treatment approaches have been used for the treatment of PE including local anaesthetic sprays, propranolol and serotonin reuptake inhibitors. Sexual side effects, e.g. decreased libido, orgasm inhibition, erectile dysfunction and priapism, related to use of antidepressant drugs have been reported. Studies that were not specifically designed to determine antidepressant-associated sexual side effects reported 5-10% sexual dysfunction in the patients using tricyclic antidepressants (TCAs). Estimates of sexual dysfunction associated with selective serotonin reuptake inhibitors (SSRIs) vary, ranging from small percentages to more than 80% (6-9).

Despite the limited number of available study comparing of their efficacy, SSRIs have been thought to have beneficial effects for the patients with PE (10-13). To the best of our knowledge, on demand use of citalopram, an SSRI, has not been systematically studied for the treatment of the PE so far. Citalopram shows an effective antidepressant activity without any important cardiotoxic, anticholinergic or sedating effects (14). In the present study, we aimed to assess the efficacy of on-demand use of citalopram in the treatment of PE.

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Patients and Methods

This is a randomized double blind, fixed dose on-demand study which was performed in Roozbeh Psychiatry Hospital in Tehran University of Medical Sciences (TUMS) during May 2006 to June 2007. Ninety two married male patients (aged 23 – 54 y) were studied. They applied to TUMS Departments of Psychiatry and Urology and were diagnosed with PE according to DSM-IV-TR (5). After complete description of the study to the subjects, the written informed consent was obtained from each patient. The study was approved by Ethics Committee of TUMS. Each patient underwent diagnostic evaluation by one trained psychiatrist by using Structured Clinical Interview for DSM-IV-TR. Each patient evaluated by researchers to exclude the organic sexual dysfunctions. Exclusion criteria was: the presence of erectile dysfunction and inhibited male orgasm, a severe physical or mental illness, the history of alcohol and any substance abuse or dependence, the presence of any endocrinological state and taking any psychotropic medication within last 2 weeks. All patients were heterosexual. The patients were randomly assigned in two groups: group 1 consisting of 49 patients, and group 2 consisting of 43 patients in the double-blind design. In group 1, the patients received one tablet (20mg) citalopram, and in group 2 the patients received one tablet of placebo four hours before intercourse. The use of concomitant medications was prohibited. The intravaginal ejaculation latency time (IELT) was defined as the duration between vaginal intromission and ejaculation. All of the subjects were asked to determine the intravaginal ejaculation latency time before initiating and after 4-weeks of treatment period via a chronometer. The patients and their wives were encouraged to engage in coitus at least twice a week and record intravaginal ejaculation latency time. All patients and their partners were individually interviewed at the beginning of the study and at the end of treatment period. All patients were asked to complete the Chinese Index of Premature Ejaculation (CIPE) (15) questionnaire before and after the treatment period. Statistical analysis was performed by using independent and paired T-test.

Results

Twelve patients left the study during follow up period, five of them because of adverse effects (headache and nausea). 80 patients completed the study. The mean age, mean IELT and mean CIPE score in both group was obtained.

Table 1. Baseline data of patients

Variable	Group 1	Group 1	P
Mean age (years)	34.28±6.67	33.76±5.93	NS*
Mean IELT(seconds)	66.78±36.94	63.44±33.16	NS
Mean CIPE score	27.28±3.29	28.36±2.44	NS

*NS: Non Significant

This baseline data were compared in two groups and was not statistically significant (Table 1).

The mean IELT was 80.85±43.05 seconds in group 1 and 65.71 ± 34.26 seconds in group 2 at last assessment (P = 0.000). The mean IELT considerably increased after 4 weeks treatment in group 1 (P = 0.001) but not in group 2 (NS). The difference in the IELT between two groups arrived a statistical significance at the evaluation of week 4 (P = 0.001). The mean changes in IELT from the baseline in group 1 was significantly higher compared to group 2.

The mean CIPE score in group 1 and 2 increased 1.14 ± 1.04 and 0.52 ± 0.50 respectively. The CIPE score increased after 4 weeks treatment in both groups but more in group 1. The difference in the mean CIPE score between two groups was statistically significant (P = 0.002).

Discussion

The main findings of our study confirmed that On-demand use of citalopram is effective in treatment of premature ejaculation and citalopram is more efficacious than placebo in the treatment of this sexual disorder, However the effects of on-demand use of SSRIs on IELT was lower than daily usage method (16). It is postulated that acute treatment with SSRIs, including those with short half-lives, will not produce an ejaculation delay equivalent to that induced by daily treatment of SSRIs (17).

Our study also confirmed that the CIPE questionnaire is a useful method for the evaluation of this sexual disorder.

The inhibitory effect of serotonin on libido, ejaculation and orgasm has been attributed to serotonin-induced decrease in dopamine (a neurotransmitter enhancing sexual function) level in central nervous system (18,19). Actually, the effect of serotonin in the development of premature ejaculation and other sexual dysfunctions was hypothesized based on the observations that imipramine had more significant sexual dysfunctions compared to the desipramine, and antidepressant- induced orgasm

inhibition could be reversed by a non-selective serotonin antagonist, cyproheptadine (20,21).

Selective or non-selective serotonin reuptake inhibitors have been demonstrated to be effective for the treatment of premature ejaculation (10-12,20). Girgis et al (23) reported that clomipramine, a nonselective serotonin reuptake inhibitor, in low doses was effective in the treatment of premature ejaculation, though high doses could limit its use because of adverse events (18). Actually on-demand use of SSRIs can minimize their side effects on libido and orgasm. Citalopram also provides improvements on the CIPE scale of the patients.

In summary our study confirmed that on-demand use of citalopram can improve the ejaculatory time and sexual function in patients with premature ejaculation. In addition the on-demand usage can decreases the intake dosage and consequently can lower SSRIs side effects in comparison with daily usage method. Although citalopram may be an effective treatment of premature ejaculation with on-demand usage, However further studies are warranted.

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