EVALUATION OF SAFETY AND EFFICACY OF CITALOPRAM IN THE TREATMENT OF PREMATURE EJACULATION

ABDUALLAH AHMED ABDUALLAH ELSHEIKHE

University of science and technology
E-mail: elsheikhabduallah@gmail.com

Abstract:-
Background: Despite the limited number of available study comparing of their efficacy, selective serotonin re-uptake inhibitors (SSRI) have been thought to have beneficial effects for the patients with premature ejaculation.

Objective to evaluate safety and efficacy of citalopram in the treatment of premature ejaculation

I. INTRODUCTION

In general, the prevalence of premature ejaculation (PE) is reported as being between 22 and 38% in the adult male population, [1,2] and up to almost 40% of men experience the problem on a recurring basis.[3,4] It is generally assumed that selective serotonin reuptake inhibitors (SSRIs) sexual side effects are related to increased central 5-hydroxytryptamine (5-HT, serotonin) neurotransmission and activation of postsynaptic 5-HT receptors.[5,6] Selective SSRIs (paroxetine, fluoxetine, sertraline) are reported to be effective for treating PE.[7,8] In addition, selective noradrenaline reuptake inhibitors, nortriptyline and protriptyline, have been found to be associated with delayed ejaculation.[9]

SSRIs are selective for inhibition of 5-HT uptake, with selectivity over noradrenaline uptake ranging from 54 nm (fluoxetine) to 3400 nm (citalopram).[10] Work on citalopram has been inconsistent. For example, in a randomized, double-blind study, 31 men with PE were randomly assigned to receive paroxetine (20 mg/day) and citalopram (20 mg/day) for 5 weeks. Paroxetine exerted a strong delay (8.9-fold) increase, whereas citalopram mildly delayed ejaculation (1.8-fold).[11] However, a later study showed clear benefit.[12] In addition; real long-term efficiency of different selective SSRIs in treating PE has not yet been defined. In most published studies, treatment and follow-up times have been only weeks and these studies have been concentrated mainly on shortterm effects. Although the therapeutic effect of a drug is seen within weeks, alleviation of problem for a much longer time is required. Citalopram is a potent and highly SSRIs antidepressant, which has been introduced in therapy as a racemic drug.[13] Ranking SSRIs regarding their selectivity reveals citalopram, sertraline, paroxetine, flavoxamine and fluoxetine, in decreasing order.[11] If selectivity for the serotonergic system over other systems would be the determining factor for the inhibitor process on ejaculation, it would be expected that citalopram would cause considerable delay in ejaculation. For physiological PE pharmacological management, various agents have been used with variable success rates. In some reports, after the end of therapy, the PE recurs in as much as 90% of patients.[14]

II. OBJECTIVES

General objective:

Evaluate safety and efficacy of citalopram in the treatment of premature ejaculation from October 2017 to October 2018.

Specific objectives:

- To evaluate the effect of citalopram in PE
- To evaluate intravaginal ejaculation latency time
- To assess the sexual satisfaction and intercourse satisfaction according to International Index of Erectile Function (IILEF)
- To detect the side effects of citalopram in PE male patients

III. METHODOLOGY

3.1 Study design:
A prospective cross sectional hospital based study.
3.2 Study area:
This study was conducted in Khartoum hospital for Dermatology and Andrology and Omdurman Military hospital
3.3. Study period:
This study was conducted in the period from October 2017 to October 2018.
3.4 Study population:
All male patients diagnosed with premature ejaculation (PE)
3.4.1 Inclusion criteria:

- The patients suffering from male with premature ejaculation

3.4.2 Exclusion criteria:

- Major psychiatric illness like epilepsy, schizophrenia, mental retardation.
- Withdrawal from opioid derivatives.

- The study excludes men were refused to participate in this study.

3.5 Sample size:

The sample size was covered all male patients diagnosed with PE during study period.

3.6 Sample technique:

Sample type is random simple sampling (SRS) where all patients with PE who meeting the inclusion criteria.

3.7 Data collection tools:

Structured close ended questionnaire was used to collect the data of the patients, included; demographic variables, clinical features, efficacy and safety of citalopram

3.8 Study variable:

3.8.1 Dependent

- Efficacy and safety of citalopram

3.8.2 Independent

- Demographic data: age, education, occupation and residence
- Clinical feature: comorbidities and type of PE

3.9 Data management and statistical analysis:

Statistical analyses were performed by using the Statistical Package for the Social Sciences software, version 21.0 (SPSS Inc., Chicago, Illinois, USA). Descriptive analysis was done for all variables. And the comparison was done by using chi-square and paired t-test tests. The significance level adopted was $p < 0.05$.

IV. RESULTS

A total of 50 males with PE were participated in this study, their mean (±SD) was 37.4years (±8.9), in their demographic characteristics; the majority of the participants 22(44%) were higher educated, 17(34%) were employed, 27(54%) were urbanized residents. Also, the mean marriage duration (±SD) of them was 8.1 years (±5.2). Moreover; in their lifestyle, 28(56%) were smokers and only 17(34%) were performed regular exercise (table 1)

According to the clinical features of the male patients with PE, in the premature ejaculation types, 31(62%) of the patients had secondary PE and 19(38%) had primary PE. In comorbidities; 8(16%) of them had hypertension, 4(8%) had DM and 2(4%) had heart diseases (table 2)

According to the self-estimated intravaginal ejaculatory latency time (IELT); the mean (±SD) of the IELT before using citalopram was 1.5 (±1.1) minutes and after using of citalopram IELT became 4.3(±1.7) minutes. And the difference was statistically significant (P= 0.000) (figure 1)

Regarding to the sexual satisfaction for PE patients, 48 (96%) of the participants were satisfied after citalopram administration, while 45 (90%) of them were unsatisfied before citalopram usage (P. value= 0.000) (table 3)

In the intercourse satisfaction according to International Index of Erectile Function (IILEF); the mean (±SD) score of intercourse satisfaction before citalopram use was 6.2(±3.6) and after citalopram use was 14.7(±1.9). The difference was statically significant (P. value= 0.000)

In the Drug-related side effects, 10(20%) of the participants had dry mouth, 5(10%) had nausea, 3 (6%) had loss of appetite, 1(2%) had headache and also one (2%) patient had insomnia (table 4)

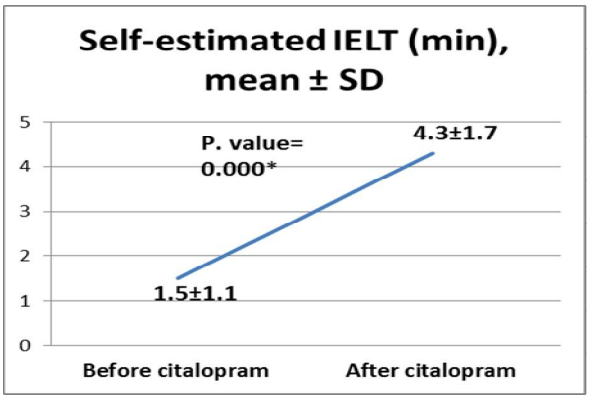


Figure 1: self-estimated intravaginal ejaculatory latency time (IELT) among male patients with PE (N= 50). IELT; intravaginal ejaculatory latency time

Table 3: satisfaction status before and after citalopram administration (N= 50)

	Before citalopram	After citalopram	P. value
Sexual satisfaction	5 (10%)	48 (96%)	0.001*
Sexual dissatisfaction	45 (90%)	2 (4%)	
Total	50 (100%)	50 (100%)	

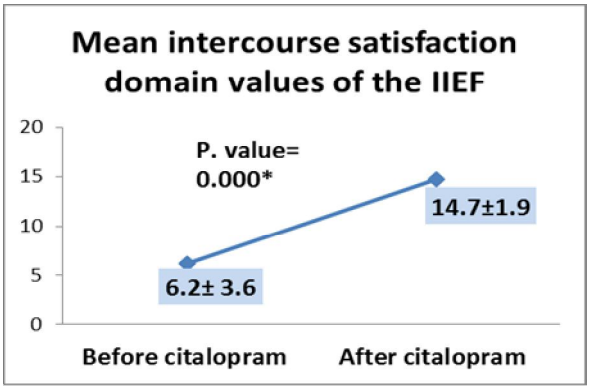


Figure 2: Mean intercourse satisfaction domain values of the International Index of Erectile Function (IILEF) among male patients with PE (N= 50).

Table 4: Drug-related side effects of citalopram among male patients with PE (N= 50)

	Frequency	%
Dry mouth	10	20
Nausea	5	10
Loss of appetite	3	6
Headache	1	2
Insomnia	1	2

CONCLUSION

The current study concluded that, despite the mild side effects, citalopram was significantly improved self-estimated intravaginal ejaculatory latency time (IELT), sexual satisfaction and intercourse satisfaction domain values.

RECOMMENDATION

- Citalopram is effective in treatment of the premature ejaculation. So prescript it in a proper manner is recommended for male patients with PE.
- Further investigations with large sample in which long-term affectivity of this drug is taken into consideration are required.

REFERENCES

[1] Spector IP, Carey MP. Incidence and prevalence of sexual dysfunctions. A critical review of the empirical literature. Arch Sex Behav 1990; 19(4): 389–408.

[2] Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. JAMA 1999; 28: 537–544.

[3] Nettelbladt P, Uddenberg N. Sexual dysfunction and sexual satisfaction in 58 married Swedish men. J Psychosom Res 1979; 23: 141–147.

[4] Frank E, Anderson C, Rubinstein D. Frequency of sexual dysfunction in 'normal' couples. N Engl J Med 1978; 299: 111–115.

[5] Olivier B, Van Oorschot R, Waldinger MD. Serotonin, serotonergic receptors, selective serotonin reuptake inhibitors and sexual behaviour. Int Clin Psychopharmacol 1998; 13(Suppl 6): S9–S14.

[6] Waldinger MD, Zwinderman AH, Olivier B. Antidepressants and ejaculation: a double-blind, randomized, placebo-controlled, fixed-dose study with paroxetine, sertraline, and nefazodone. J Clin Psychopharmacol 2001; 21: 293–297.

[7] Kara H, Aydın S, Agargun MY, Odabas O, Yilmaz Y. The efficacy of fluoxetine in the treatment of premature ejaculation: a double-blind placebo controlled study. J Urol 1996; 156: 1631–1632.

[8] Lee HS, Song DH, Kim C-H, Choi HK. An open clinical trial of fluoxetine in the treatment of premature ejaculation. J Clin Psychopharmacol 1996; 16: 379–382.

[9] Pollack MH, Reiter S, Hammerness P. Genitourinary and sexual adverse effects of psychotropic medication. Int J Psychiatry Med 1992; 22: 305–327.

[10] Leonard BE. Comparative pharmacologic properties of SSRIs in anxiety. In: Feighner JP, Boyer WF (eds.). Selective Serotonin Reuptake Inhibitors: Advances in Basic Research and Clinical Practice, 2nd edn. Chichester: John Wiley & Sons Ltd, 1996 pp. 35–62.

[11] Waldinger MD, Zwinderman AH, Olivier B. SSRIs and ejaculation: a double-blind, randomized, fixed-dose study with paroxetine and citalopram. J Clin Psychopharmacol 2001; 21: 556–560.

[12] Atmaca M, Kuloglu M, Tezcan E, Ustundag B, Semercioz A. Serum leptin levels in patients with premature ejaculation before and after citalopram treatment. B J U Int 2003; 91: 252–254.

[13] Hyttel J. Citalopram – pharmacological profile of a specific serotonin uptake inhibitor with antidepressant activity. Prog Neuropsychopharmacol Biol Psychiatry 1982; 6: 277–295.

[14] Frink MC, Hennies HH, Englberger W, Haurand M, Wilffert B. Influence of tramadol on neurotransmitter systems of the rat brain. Rzneimittelforschung 1996; 46: 1029–1034.

[15] Arie P.[1] and Ege C. Classification and definition of premature ejaculation. Transl Androl Urol. 2016 Aug; 5(4): 416–423.

[16] Jannini EA & Lenzi A. Ejaculatory disorders: epidemiology and current approaches to definition, classification and subtyping. World J Urol 2005;23, 68–75.

[17] Coolen LM, Olivier B, Peters HJ & Veening JG. Demonstration of ejaculation-induced neural activity in the male rat brain using 5-HT1A agonist 8-OH-DPAT. Physiol Behav 2004;62, 881–891.

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