Correlation study of SSRIs drugs in Sexual Dysfunction

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Abstract: Background and aim:Sexual dysfunction could be most important side effect of selective serotonin reuptake inhibitors (SSRIs). Sexual dysfunction is common among both men and women with major depressive disorder. Propose of this study is to evaluate the effect of SSRIs drug on sexual tendency and ability. **Method:**Present study was conducted during November 211to January 2012. Sample consisted of 584 subjects. All patients attending psychiatry clinic. 247subjects used SSRIs drug and 337 subjects used other psychiatry drugs. **Results:**Results of the research indicated that out of 247subjects used SSRIs drug 93people(38%) did not show drug side effects, but from other subjects; 60people (24%) reduced sexual tendency, 25people(10%) total disruption of sexual tendency, 33people(13%) lack of sexual tendency before onset of treatment, 10 people (4%) reduced sexual tendency before beginning of treatment, 10people(4%) increased sexual tendency, 7 people (3%) lack of satisfaction, 2people(0.08%) reduced or delayed satisfaction were reported. **Discussion and Conclusion:** The results of studies investigating correlation of SSRIs drugs and Sexual Dysfunction, which there are significant relation between consumption of SSRIs drugs and reduce or disruption of sexual tendency that may be one the most important problem among the couples.
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Introduction

Selective serotonin reuptake inhibitors (SSRIs) are now employed as a first-stage treatment for depression, in part because of their relatively benign adverse effect profile and safety in overdose, especially compared with the older tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs). However, their efficacy in depression is no greater and their onset of action is no more rapid than that of the MAOIs or TCAs. In addition, they are not completely devoid of side effects (1). Sexual dysfunction, weight gain and sleep disturbance are the most troubling adverse events seen during long-term SSRI therapy (2). SSRIs are devoid of receptor interactions and their associated side effects which characterise MAOIs and TCAs (3), and their only apparent pharmacological activity is the inhibition of the reuptake of serotonin. Most of side effects result from an over-stimulation of various serotonin receptors in both the brain and the periphery (4). The most common side effects associated with SSRIs such as nausea and headache, nervousness, insomnia and sexual dysfunction (5) are related to the stimulation of 5-HT2 and 5-HT3 receptors. While the SSRIs are frequently used by many people for depression treatment but they are not devoid of side effects (6). A study revealed that of 134 patients with major depression surveyed, 40% of men and 50% of women reported decreased sexual interest (7), while 40% to 50% of the sample also reported reduced levels of arousal. Sexual dysfunction is also a common side effect of SSRIs (8). The assessment of SSRI-induced sexual dysfunction is thus complicated by the fact that such effects may result from the depressed state. The sexual experience can broadly be divided into three phases. Stage 1: interest and desire (libido); Stage 2: physiologic arousal; and Stage 3: orgasm. Neurotransmitters and hormones are believed to influence SSRI-associated SD (9,10) Dopamine, serotonin (5HT), testosterone, and estrogen influence sexual interest and desire(libido). Nitric oxide, acetylcholine, and 5HT are important modulators of physiological sexual arousal. Finally, norepinephrine and 5HT play important roles in orgasm. Recent evidence suggests that additional neurotransmitters such as glutamate may also be involved with sexual physiology (11). It is clear, however, that SSRIs may negatively influence any or all phases of the sexual cycle with decreased or absent libido, impairment of arousal and erectile dysfunction but delayed

ejaculation and absent or delayed orgasm are their most common effects (12). Selective serotonin reuptake inhibitors (SSRIs) such as citalopram, fluoxetine, fluvoxamine, escitalopram, paroxetine, and sertraline are common choices as first-line antidepressants. The efficacy of these drugs is higher than placebo and comparable to other classes of antidepressants in treating patients with major depression (13,14). While the response rates of these drugs in randomized controlled efficacy trials is ~50-70%(14), effectiveness studies highlight that use subjects yields lower response (47%) and reduction (28-33%) rates (15). Side effects and medication non-adherence to therapies are two reasons for inadequate responses to antidepressant agents. Approximately 20% of patients will discontinue their antidepressant medications (16). The total number of adverse effects is a significant predictor of medication non-adherence; 36% of patients who stop their medication do so because of adverse effects (16,17).Sexual dysfunction (SD) is commonly observed during SSRI therapy, occurring in approximately 20-70% of patients taking an SSRI(18-20) These sexual side effects are particularly disconcerting to patients because they are persistent and generally do not abate like headache, nausea, insomnia, diarrhea, and other early onset side effects, which generally dissipate after the first few weeks of therapy. Only 10-15% of patients experiencing SSRI-associated SD report significant improvements after 6-12 months (20-22) At the present study our aim is to evaluate the effect of SSRIs drug on sexual tendency and assessing the SSRIs drugs on sexual dysfunctions.

Method

Present study was conducted during November 211to May 2012. All patients attending psychiatry clinic were questioned and assessed as aspect of drug usage and medications background. Assessment form which contains the identification data, type of medicine and medication and duration of drug consumption were questioned from all of the patients. Patients that were consuming the SSRIs drug, sexual side effects were questioned, and all of the sexual stages (Stage 1: interest and desire (libido); Stage 2: physiologic arousal; and Stage 3: orgasm.) of SSRIs patients evaluated Sample consisted of 584 subjects. 247subjects used SSRIs drug and 337 subjects used other psychiatry drugs.

Results

Total numbers of patients were 584 subjects, which 274 subjects were prescribed by SSRIs drugs or had long lasting usage of the drugs. Out of these patients 150 subjects were women and 97 subjects' men. Rest of the patients (337 subjects) used other psychiatry drugs except of SSRIs drugs, which are not included in our study. Results of the research indicated that out of 247 subjects used SSRIs drug 93 people (38%) did not show drug side effects. This means that around one third of patients does not have any problem with SSRIs drugs as aspects of sexual functions, but from other subjects; 60 people (24%) reduced sexual tendency, 25 people(10%) total disruption of sexual tendency, 33 people(13%) lack of sexual tendency before beginning of treatment(LSTBT), 10 people(4%) reduced sexual tendency before beginning of treatment(RSTBT), 10 people(4%) increased sexual tendency, 7 people(3%) lack of satisfaction, 2people(0.08%) reduced or delayed satisfaction, 1 people(0.04%) reduced masturbation, 1 people(0.04%) early ejaculation and 5 people(2%)data not clear were reported. A variety of strategies have been reported in the management of SSRI-induced sexual dysfunction, including dose reduction, drug holidays, substitution of another antidepressant drug, and various augmentation strategies, including use of sildenafil citrate, buspirone, and others.

Table 1. Relation SSRIs drug usage with sexual dysfunction

Types Problems	No Side effect	reduced sexual	disruption of sexual	LSTBT	RSTBT	increased sexual	lack of satisfaction	delayed satisfaction	reduced masturbation	early ejaculation	data not clear
Patients Frequency	38%	24%	10%	13%	4%	4%	3%	0.08%	0.04%	0.04%	2%

Discussion and Conclusion

Serotonin selective reuptake inhibitors (SSRI) are commonly used in the treatment of many psychiatric disorders. Although possessing a relatively mild side effect profile, these drugs can cause a number of difficulties, including sexual dysfunction. The results of study investigating correlation of SSRIs drugs and Sexual Dysfunction, which there are significant relation between consumption of SSRIs drugs and reduce or disruption of sexual tendency that may be one the most important problem among the couples. Results of our research indicated that 24% of SSRIs patients had reduced sexual desire and tendency and 10% of patients reported total disruption of sexual desire and tendency. It means that around 34% of SSRIs patients have problem with this type of drugs and long time consumption of SSRIs drugs may lead them to total sexual dysfunction. Rosen et al.(12) also revealed that SSRIs may negatively influence any or all phases of the sexual cycle with decreased or absent libido, impairment of arousal and erectile dysfunction but delayed ejaculation and absent or delayed orgasm are their most common effects. SSRIs are normally preferred as first-stage of depression treatments. These drugs are usually better tolerated and are less likely to induce toxicity than previous agents such as tricyclic antidepressants and monoamine oxidize inhibitors (13,14). Many early-onset side effects of the SSRIs such as nausea, diarrhea, headache and agitation, disappear within 2-3 weeks. Long-term side effects may, however, be more important in terms of patient compliance and quality of life. Adverse events that persist as long as the patient takes the medication represent a knottier problem. Unfortunately many of them are not as well described as those in the drug package insert, which are based on short-term studies. In addition many of the long- term adverse effects such as sexual dysfunction, weight changes and sleep disorders can be confused with depressive symptoms making it difficult to distinguish them from residual depressive symptoms(23). Unluckily, sexual dysfunction is frequently observed during SSRI treatment. These side effects are often long-lasting and resistant to treatment (20,21) Common symptoms of SSRI-associated sexual dysfunction include decreased libido, problems with arousal and erection, and delayed or absent orgasm. The severity and appearance of these side effects varies greatly from patient to patient. The sexual domains studied include libido, sexual arousal, erectile dysfunction, and anorgasmia. Additional insight into the effects of SSRIs on the physiology of the sexual experience is provided by studies of SSRIs for the treatment of premature ejaculation and associations of variations in the serotonin transporter with response/non- response to these treatments. Another study (24) estimated the prevalence of SSRI-induced sexual dysfunction to be 26.6% of a French sample and 39.2% of a British sample. Patients reported that experiencing these sexual impairments negatively affected their quality of life, self-esteem, mood and relationships with sexual partners. If ignored, sexual dysfunction can maintain the depression, compromise treatment outcome and lead to non-compliance. This may be a particular problem for patients on maintenance therapy since treatment interruption may trigger recurrence of depression (25). The elusive nature of sexual dysfunction makes it challenging to assess the role of antidepressant effects on the sexual experience; isolating antidepressants as the single contributing factor is not always straightforward. Thus, important aspects of evaluating the studies completed to date include study design and the methods for assessing sexual functioning. Sexual side effects from SSRIs antidepressants are common, persistent, and vary in intensity and presentation across patients. Consequently, patients should be monitored early in the treatment with SSRIs for adverse sexual effects. The prevalence of antidepressant-induced sexual dysfunction in this study is similar to previous estimates reported in the literatures. The impact of antidepressant-induced sexual dysfunction is substantial and negatively affects quality of life, self-esteem, mood, and relationships with sexual partners.

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