



Study Of Prevalence Of Orgasmic Dysfunction Induced By Anti-Depressant In Female Patient Belonging To Reproductive Age

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Abstract

Background:

Antidepressants are widely prescribed in psychiatry. Among various side-effects of antidepressants, sexual adverse-effects are major concern among patients. Sexual arousal, desire, and orgasmic dysfunctions are common sexual side-effects among females. Only few studies have addressed sexual dysfunction induced by antidepressants in females with a prevalence of 30%-65%. Among which very few studies have focused specifically on orgasmic dysfunction. Suppression of sympathetic nervous system (SNS) activity by antidepressants in genital nerves and serotonergic neurotoxicity leads to sexual dysfunction related to orgasm and desire sexual adverse effects.

Aims & Objective:

The objective of this study is to estimate the prevalence of orgasmic dysfunction in female patients of reproductive age group receiving antidepressant. To assess their quality of sexual life which helps to choose better antidepressants and manage orgasmic dysfunction effectively.

Methods:

After obtaining informed consent, 64 adult female patients of reproductive age, attending Psychiatry-OPD, being prescribed anti-depressants according to standardized prescribing guidelines for psychiatric disorder diagnosed with ICD-10 will be interviewed before starting medication. Those who have no sexual abnormality and meeting inclusion and exclusion criteria will be considered as sample, who will be administered structured questionnaire again after attaining remission. Item 11-13 of FSFI (Female Sexual Function Index) is used to assess the orgasmic dysfunction.

Results:

Prevalence of orgasmic dysfunction induced by antidepressants were found to be 60.9%. Prevalence of orgasmic dysfunction caused by various antidepressants include Escitalopram (80.9%); Sertraline (78.5%); Paroxetine (50%); Clomipramine (50%); Fluoxetine (50%); Duloxetine (30%); Amitriptyline (28.5%).

Conclusion:

The incidence of sexual adverse effects and effects of anti-depressants in the quality of sexual life is being underestimated, and hence these factors should be given weightage when prescribing anti-depressants. Addressing sexual dysfunction will help to enhance the drug compliance & there by provide a better treatment prognosis for the patient.

Keywords: female sexual dysfunction, antidepressant, orgasmic dysfunction

Introduction

In psychiatry, antidepressants are used for a wide range of illnesses including mood disorders, anxiety disorders, drug abuse-associated behavioral changes, pre-menstrual dysphoric syndrome, post-menopausal

disorder, somatoform disorders, eating disorders, and sleep disorders. ^[1] Among various side-effects of antidepressants, sexual adverse-effects are major concern among patients. ^[1] Sexual arousal, desire, and orgasmic dysfunctions are common sexual side-

effects among females. ^[1] Only few studies have addressed sexual dysfunction induced by antidepressants in females with a prevalence of 45-80%. ^[2,3] Among which very few studies have focused specifically on orgasmic dysfunction. Indian society is prone for stigma, inhibition, and conservative, on expressing sexual dysfunction. The majority of married women, according to a recent survey have adequate sexual knowledge and a generally liberal attitude on sex. ^[4] 30% to 65% of cases of sexual dysfunction are linked to the use of antidepressants, including SSRIs, SNRIs, TCAs, MAOIs, and other antidepressants. Reboxetine, bupropion, mirtazapine, and moclobemide, when compared to other antidepressants, had less severe sexual adverse effects (0–24%). However the efficacy of these drugs except bupropion and mirtazapine are comparatively less compared to other antidepressant, hence they are not widely used compared to others ^[5] All parts of the sexual response cycle, including the excitation phase, the arousal phase, and orgasmic phase, may be affected by the adverse effects on sexual functioning brought by antidepressants. This study sheds information on the prevalence of orgasmic dysfunction induced by antidepressants and compare orgasmic dysfunctions brought on by various antidepressant drug classes.

Aims & Objectives

1. To estimate the prevalence of decreased orgasm induced by anti-depressants in female patients of reproductive age group.
2. To assess their quality of sexual life which helps to choose better antidepressants and manage decreased orgasm effectively.

Methodology

It is a cross sectional- observational study. Sampling was done by convenience sampling method. After obtaining informed consent, 64 adult female patients of reproductive age (by population proportion method), attending Psychiatry-OPD, being prescribed anti-depressants according to standardized prescribing guidelines for psychiatric disorder diagnosed with ICD-10 and those who have no sexual abnormality prior to starting antidepressants and meeting inclusion and exclusion criteria will be considered as sample, who will be administered structured questionnaire again 1month after attaining remission. Item 11-13 of FSFI (female sexual

function index) is used to assess the orgasmic dysfunction.

Inclusion Criteria

1. Female adult population >18yrs
2. Married female
3. Diagnosed with psychiatric disorder (ICD-10)
4. Good compliance to drug (assessed using MARS questionnaire – medication adherence rating scale). ^[4]
5. Prescribed anti-depressant (prescribing guidelines) for minimum of 6weeks and adequate dose.
6. Attained remission

Exclusion Criteria

1. Study subjects who have organic causes of sexual dysfunction
2. Study subjects who have sexual dysfunction induced by other drugs other than anti-depressants.
3. Study subjects who had poor compliance to antidepressants prescribed.
4. Study subjects who have previous H/o sexual dysfunction, marital disharmony and discord.
5. Patient who is Known case of DM, HTN, any other chronic co-morbid medical illness
6. Pregnant mothers & lactating mothers
7. Females who have attained menopause
8. Any substance use or dependence
9. Study subjects who have not given consent to participate.

Review Of Literature

1. Prevalence and Type of Sexual Dysfunction in Female Patients Receiving Antidepressant Medications done by Sandeep Grover, Natasha Kate, Eepsita Mishra, and Ajit Avasthi, 2020. ASEX questionnaire was used for 71 married females. Decreased orgasm was seen in 50.7%, with overall sexual dysfunction induced by antidepressants 80.2%. ^[2]
2. Sexual functioning in females with depression in remission receiving escitalopram Pritha Roy,¹ Bandna Gupta,² Adarsh Tripathi,² Anil Nischal,² Pronob Kumar Dalal,² and Sujita Kumar Kar². FSFI questionnaire was administered on 50 females and compared with control group. It was noted that 68% reported to have decreased orgasm. On comparing with

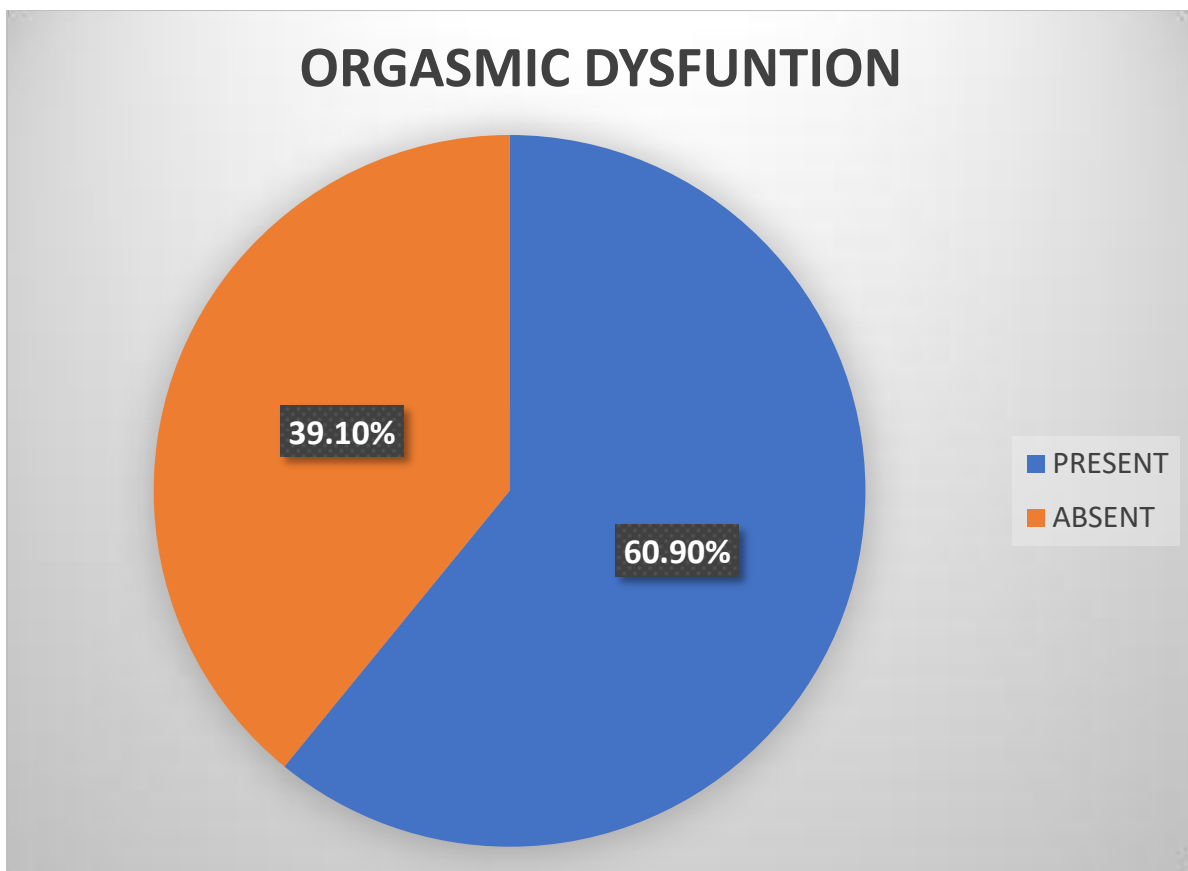
control group those receiving antidepressants had decreased orgasm which was statistically significant.^[7]

3. Prevalence and pattern of sexual dysfunction in married females receiving antidepressants: An exploratory study, Sandeep Grover, Ruchita Shah, Alakananda Dutt, and Ajit Avasthi, 2012, FSFI questionnaire was used for 80 married females. Prevalence of decreased orgasm reported was 63.8%. Problem with orgasm was most frequent with mirtazapine (83.33%), followed by SSRIs (65.45%), TCAs (57.14%) least with SNRI (50%).^[3]

Results

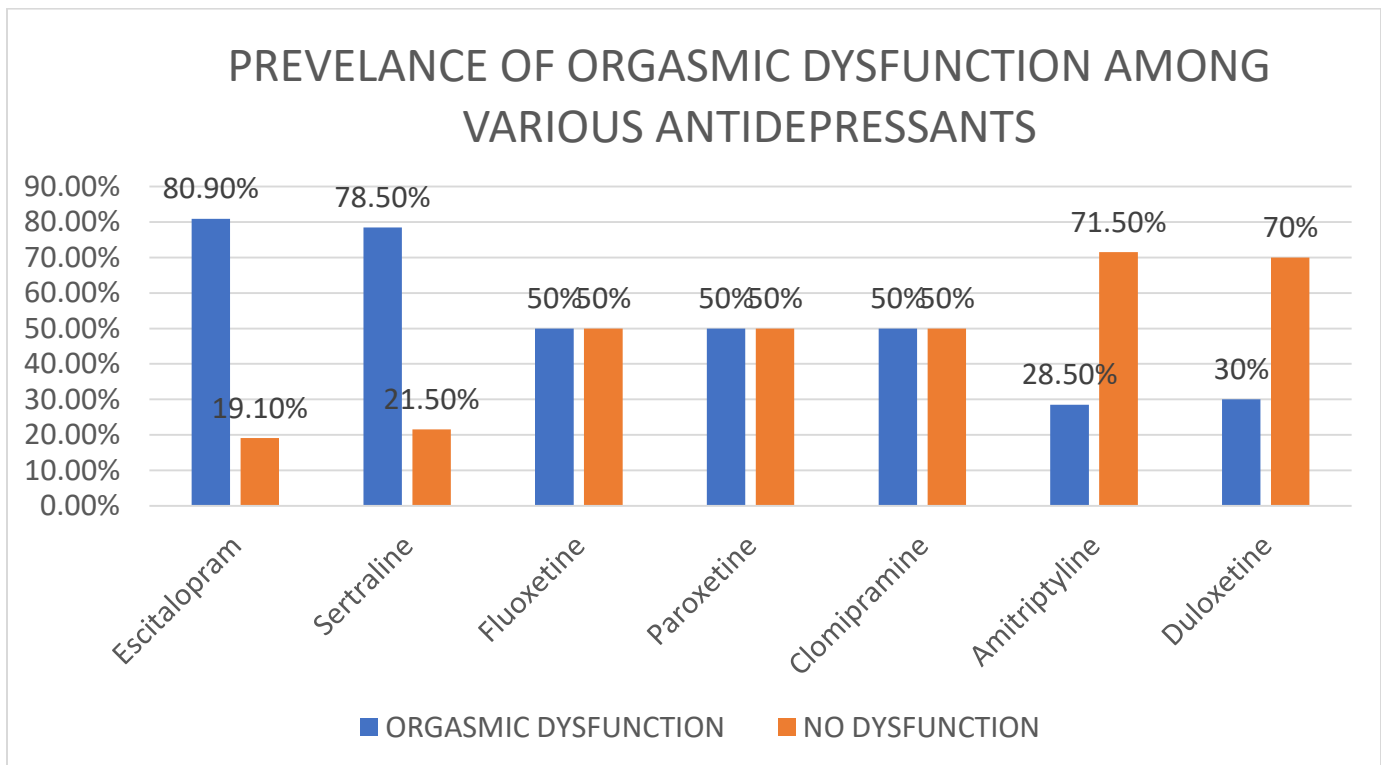
39 females out of 64 reported to have cutoff scores less than 5.05 indicative of decreased orgasm. Prevalence of orgasmic dysfunction induced by antidepressants were found to be 60.9%.

Prevalence of orgasmic dysfunction caused by various antidepressants include Escitalopram (80.9%); Sertraline (78.5%); Paroxetine (50%); Clomipramine (50%); Fluoxetine (50%); Duloxetine (30%); Amitriptyline (28.5%).



DRUG	NO. OF PATIENTS PRESCRIBED	NO. OF PATIENT WITH ORGASMIC DYSFUNCTION	NO. OF PATIENTS WITHOUT ORGASMIC DYSFUNCTION
ESCITALOPRAM	21(100%)	17(80.9%)	4(19.1%)

SERTRALINE	14(100%)	11(78.5%)	3(21.5%)
FLUOXETINE	8(100%)	4(50%)	4(50%)
PAROXETINE	2(100%)	1(50%)	1(50%)
CLOMIPRAMINE	2(100%)	1(50%)	1(50%)
AMITRIPTYLINE	7(100%)	2(28.5%)	5(71.5%)
DULOXETINE	10(100%)	3(30%)	7(70%)
TOTAL	64(100%)	39(60.9%)	25(39.1%)



Discussion

Clitoris, an organ of the external genitalia, is recognized as the major female sexual organ in charge of causing orgasms in females. As it has three times more nerve supply than a penis, the clitoris is a particularly sensitive organ. The majority of women prefer clitoral stimulation for masturbation,

particularly when the shaft is more engaged than the glans since the latter is extremely responsive and becomes sensitive to excessive stimulation. [8] A female experiences orgasm as a result of clitoral stimulation brought on by the penile thrusting that occurs during coitus. Females feel increased excitation before to the orgasm, which is brought on by the contraction of the ischiocavernous muscle,

which causes the clitoris under the clitoral hood to withdraw.^[9]

Desire, arousal, and orgasm are the three phases in the three phase model that Kaplan had presented.^[10] Sexual stimulation or endogenous production of the desire can result in the creation of two phases: phase 1 is the spontaneous sexual desire, and phase 2 is the result of physical excitement. Master and Johnson claim that the four phases of the female sexual response cycle are excitation, plateau, orgasmic, and resolution.^[11] Robinson said in 1976 that the plateau phase was only the late excitation phase; as a result, this model was further simplified to three phases: the excitement, orgasmic, and resolution phases.^[12]

During these stages of the female sexual response cycle, several changes take place in both the exterior and internal genitalia. The orgasmic phase is characterized by a well-defined flushing of the skin, trembling of the breasts, contractions of the uterus and labia minora, repetitive sphincter contractions, loss of voluntary muscular control, tachycardia, and hyperventilation.^[13]

An electroencephalogram showed ipsilateral temporal activity when a right-handed person was exposed to sexual stimuli. The medial amygdala and female sexual behavior are related. There have been reports of orgasms brought on by electrical stimulation of the septum.^[14] Complaints about decreased sexual desire, libido, vaginal lubrication, genital sensitivity, and orgasmic capacity are caused by physiological abnormalities that interfere with the typical female sexual response. Oxytocin also known to have a role in female sexual orgasmic phase.^[15]

Female orgasm is revealed to have a key role for the nucleus paragiganto cellularis. One of the most significant neurotransmitters known to have a role in the human sexual response cycle is dopamine.

Antidepressants are used for wide spectrum of disease in psychiatry for physical and psychological problems such as mood disorders, anxiety spectrum of disorders, behavioral changes due to substance abuse, psychological abnormalities related to menstruation, chronic pain disorders, eating disorders, and sleep disorders.

Anti-depressant acting on various receptors has a predominant side-effect profile such as daytime drowsiness, sleeplessness, muscular

spasms/twitching, restlessness, weight gain, excessive perspiration, dry mouth, nausea, sexual dysfunction, diarrhoea, constipation, and dizziness. Among which sexual side-effect are predominant in certain classes of antidepressants such as Selective Serotonin Reuptake Inhibitors (SSRI), Serotonin Nor-epinephrine Reuptake Inhibitors (SNRI), Monoamine Oxidase Inhibitors (MAOI), Tricyclic Antidepressants (TCA), and newer antidepressants.

Sexual dysfunction can be caused by a wide range of illnesses, such as cancer, renal failure, multiple sclerosis, heart disease, and bladder issues. Some medicines, such as antidepressants, anti-hypertensives, antihistamines, and chemotherapy treatments, might reduce the body's capacity to have orgasms and decreases the desire for sex. After menopause, lower estrogen levels may affect vaginal tissues and sexual receptivity. A reduction in estrogen causes the blood flow to the pelvic area to diminish, which can reduce genital feeling and lengthen the time it takes to attain orgasm.^[16]

Sexual adverse effects induced by anti-depressant may affect all phases of sexual response cycle, which includes excitement phase, arousal phase and orgasmic phase. This study enlightens the orgasmic dysfunction caused by various anti-depressants. Suppression of sympathetic nervous system (SNS) activity by antidepressants in genital nerves and serotonergic neurotoxicity leads to sexual dysfunction related to orgasm and desire sexual adverse effects.^[8] All antidepressants with serotonergic activity have the potential to produce mild to severe sexual dysfunction, including decreased libido and delayed orgasm commonly (>60%) or anorgasmia and occasionally (30%) arousal dysfunction.

Sildenafil (Phosphodiesterase 5 Inhibitor) were known to cause significant improvement in orgasm for patients experiencing orgasmic dysfunction induced by anti-depressant. It has been noted that, use of vibrators for intense vaginal stimulation helps to improve the orgasm dysfunction caused by tactile insensitivity induced by anti-depressant. Similar to arousal dysfunction, adding an dopaminergic agonist, switching or decreasing the dose of anti-depressants, were found to be useful in anti-depressant induced female sexual dysfunction. It is also noted that EROS-clitoral therapy device, PDE-

5I(phosphodiesterase -5 inhibitor) and modafinil maybe useful. ^[11]

Conclusion

The incidence of sexual adverse effects and effects of anti-depressants in the quality of sexual life is being underestimated, and hence these factors should be given weightage when prescribing anti-depressants.

Addressing sexual dysfunction will help to enhance the drug compliance & there by provide a better treatment prognosis for the patient.

Limitation

1. Small sample size and a cross-sectional design are limitations of this study.
2. We did not make an effort to evaluate the couple's marital adjustment before beginning antidepressants, and we also did not gather particular information on disagreements between the couples on numerous matters.
3. The impact of orgasmic dysfunction induced by antidepressants on marital adjustment, and partner distress was also not evaluated.

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