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Original Research Article

Prevalence of sexual dysfunction in patients receiving psychotropic medications

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ABSTRACT

Introduction: Sexual dysfunction is a known adverse effect of psychotropic medications. Even though sexual difficulties are common in patients taking psychotropic medications; very few studies have been carried out in India.

Objective: To study the prevalence and nature of SD among patients with mental illness receiving psychotropic medications under routine clinical conditions.

Materials and Methods: This study was cross sectional hospital based study conducted at tertiary care hospital, Maharashtra, India. The study used a convenience sample selected during the outpatient unit of psychiatry department. The study sample consisted of 53 married male patients who presented with psychiatric illness as diagnosed by DSM-V criteria. Psychotropic- Related Sexual Dysfunction Questionnaire (PRSexDQ-SALSEX)19, was used to assessed the participants sexual functioning.

Results: Study sample consist of 53 married male patients, the mean age of study sample was 36.74 years, out of which most of the patients were from rural (64.2%) area. The results reveal that when there is exposure to psychotropic in the patient, changes are noticed in the sexual activity. Sexual dysfunction was highest in the antipsychotic group compared to others.

Conclusion: Psychotropic- induced sexual dysfunction is very common among patients receiving antipsychotics medication. Clinicians should be aware about this while prescribing psychotropic medications and should make treatment plan to manage psychotropic- induced sexual dysfunction for better outcomes and patient's compliance to treatment.

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1. Introduction

Sexual functioning is an integral part of human life which is determined by many physiological and psychological factors.[1] It is defined as the physiological capacity to experience desire, arousal and orgasm. The four major categories of sexual dysfunctions include disorders of sexual desire/interest, arousal, orgasm, and sexual pain. Etiological causes of sexual dysfunctions could be multi factorial like physical or mental illness, substance abuse, ageing, marital or relationship problems and use of certain medications. It is often difficult to assess the degree to which these factors contribute to sexual dysfunction in any particular patient. But if the sexual dysfunction caused due do the medication which is known to cause sexual side effects then it is more relevant to explore whether decrease in dosage, a change in different Sexual dysfunctions are the disorders that are characterized by changes in the pathophysiology of the sexual response cycle[2] drug, or treatment of side effects as such, can reduce the side effects. Certain medications leads to quite specific side effects, while others affect sexual function through non-specific side effects like sedation, depression, motor dysfunction and weight gain or dryness of the mucous membranes.[3] Because of these certain side effects, the patient with sexual dysfunction caused by medication may not tell anybody about the problem, but they simply stop taking the drug which may leads to exacerbation of their primary illness.

Antipsychotics, antidepressants, benzodiazepines, anti-hypertensive, diuretics, and antihistamines are the com-

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mon medications associated with sexual dysfunction.[4] Psychotropic induced sexual dysfunction has become a common condition in clinical practice. Sexual dysfunction is widely recognized as potential side effect of the use of antipsychotic and antidepressant medications in the treatment of mental disorders. Even, studies in the past outlined that sexual dysfunction is one of the common and most distressing side effect associated with the use of various psychotropic medications[5–7] and a major cause of poor quality of life.[8] In one study conducted in European Country, 53% patients reported sexual dysfunction, of these 41% attributed their sexual dysfunction to side effects of psychotropic medications and 25 % expressed a negative attitude towards their trearment.[9]

In the review of literature it is observed that, prevalence of sexual dysf unction associated with antipsychotic medication is varying from 18 to 96%[10,11] and it is well known that hyperprolactinemia is a major cause of sexual dysfunction in patients taking antipsychotics treatment.[12] Both typical and atypical antipsychotics drugs are associated with sexual dysfunction as their side effects. In one study it is observed that, patient on combination therapy of typical and atypical antipsychotics had more sexual dysfunction than the atypical group.[13] Moreover, among sexual dysfunctions, erectile dysfunction and ejaculatory dysfunction were most prominent sexual dysfunction seen in patient taking antipsychotic medication in another study.[14]

Sexual dysfunction commonly occurs with antidepressant treatment. The reported rates of sexual dysfunction vary across antidepressants. Clayton AH et al found that SSRIs and Venlafaxine XR were associated higher rates of sexual dysfunction than bupropion and nefazodone.[15] Studies suggest that sexual dysfunction is quite prevalent in married female patients receiving antidpressants and affect all domains of sexual functioning.[16]

There is limited data on the prevalence of sexual dysfunction in patient receiving mood stabilizers. Studies done on patients of bipolar disorder in receiving lithium suggest that approximately one third of patient receiving lithium had sexual dysfunction and it was one the cause of poor medication adherence.[17] Furthermore, studies in patient receiving anticonvulsants like valproate, carbamazepine reported significant rates of sexual dysfunction.[18]

As psychotropic induced sexual dysfunction is a nonserious adverse side effect, it is less often studied and reported. However, it is an important problem for patients, because it affects patient's quality of life and their adherence to treatment. There are many studies of psychotropic induced sexual dysfunction conducted in western countries but very few in Indian population. Therefore, this study aimed to identify the prevalence of sexual dysfunction in patient receiving psychotropic medication.

2. Materials and Methods

This study was cross sectional hospital based study conducted at tertiary care hospital, Maharashtra, India. The study used a convenience sample selected during the outpatient unit of psychiatry department. The study sample consisted of 53 married male patients who presented with psychiatric illness as diagnosed by DSM-V criteria. Patients aged between 18 and 50 years on regular treatment with psychotropic medications for at least 2 months, having sexual activity for the past one month and who gave informed consent were included the study. Patient with uncontrolled psychiatric illness, co morbid medical conditions, having sexual dysfunction before start of psychotropic medications were excluded from the study. The permission was obtained from the hospital authority before commencement of study.

Psychotropic-Related Sexual Dysfunction Questionnaire (PRSexDQ-SALSEX),[19] was used to assessed the particpants sexual functioning. Psychotropic- Related Sexual Dysfunction Questionnaire is a brief and relatively noninstrusive questionnaire that has shown adequate psychometric properties in patients with psychiatric illness. PRSexDQ - SALSEX was very feasible and its internal reliability was satisfactory in patients with psychiatric illness experiencing sexual dysfunction. In addition, this questionnaire showed a good convergent validity and sensitivity to tracking changes in sexual functioning.

3. Results

Study sample consist of 53 married male patients, the mean age of study sample was 36.74 years, out of which most of the patients were from rural (64.2%) area. The education background reveals that 47.2% studied up to secondary level, while 28.3% primary level. In our study sample 62.3% were unemployed and majority pt had schizophrenia (67.9%) diagnosis and mostly was taking their medication on regular basis without any compliance issues Table 1.

The results reveal that when there is exposure to psychotropic in the patient, the changes are noticed in the sexual activity. Moreover, the antipsychotics have produced more changes in mild group of PRSexDQ than moderate group. Also few cases reported severe sexual dysfunction on PRSexDQ-SALEX on exposure to antipsychotics medication. Also, we can see patients on both psychotropic have produced significant changes in mild group of PRSexDQ than moderate group. The result indicate that, the patients who reported observed changes in sexual activity many of them experienced moderate type of sexual dysfunction on PRSexDQ -SALEX. Moreover, most of the changes seen in patients the psychotropics are spontaneous alteration in the sexual activity rather than chronic more in moderate group than mild group Table 2.

Table 1: Demographic and Clinical Characteristics

Characteristic/Variable	**N = 53**
Age (years), mean (SD)	36.74 (11.218)
Residential Area, n (%) Rural Urban	34 (64.2) 19 (35.8)
Occupation, n (%) Employed Unemployed	20 (37.7) 33 (62.3)
Education, n (%) Illiterate Primary Secondary Higher Secondary Graduate Post Graduate	3 (5.7) 15 (28.3) 25 (47.2) 6 (11.3) 3 (5.7) 1 (1.9)
Psychiatric diagnosis, n (%) Schizophrenia Depression Bipolar mood disorder Delusional disorder Mixed Anxiety Depression	36 (67.9) 11 (20.8) 3 (5.7) 2 (3.8) 1 (1.9)
Duration (years) of treatment, mean (SD) Less than 1 year 1 to 5 years 6 to 10 years More than 10 years	5.31 (5.1) 4 (7.5) 33 (62.3) 12 (22.6) 4 (7.5)

Table 2: Depicts variables in proforma across Psychotropic Related Sexual Dysfunction Questionnaire (PRSexDQ) PRSexDQ -SALSEX = Psychotropic-Related Sexual Dysfunction Questionnaire; SD: standard deviation

Variable		**PRSexDQ**			**Chi-Square Value**	**P value**
		Mild (0-5)	Moderate (6-10)	Severe (11-15)		
Exposure to Psychotropics	Anti-Psychotics	14	11	07	9.798	0.133#
	Anti-Depressants	06	02	00		
	Both	07	02	01		
	Others	00	01	02		
Psychiatry Diagnosis	Schizophrenia	17	11	08	13.094	0.109#
	Bipolar Mood Disorder	00	01	02		
	Delusion Disorder	01	01	00		
	Depression	09	02	00		
	Mixed Anxiety Depression	00	01	00		
Observed changes in Sexual Activity	Present	05	16	10	36.220	0.000*
	Absent	22	00	00		
Reported spontaneous alternation	Yes	05	16	09	32.750	0.000*
	No	22	00	01		

*Statistically Highly Significant at 5 % Level of Significance ($p<0.001$)
Statistically Non Significant at 5 % Level ofSignificance ($p>0.05$)

Table 3: Association between PRSexDQ score and number of drugs given

PRSexDQscore	**Different types of drugs**			**Total**
	Any one of the Antipsychotics or Antidepressants	**Any two of the Antipsychotics or Antidepressants or both**	**Any three of the Antipsychotics or Antidepressants or both or others**	
Mild sexual dysfunction	7(20.6 %)	24(70.6 %)	3(8.8 %)	34(100 %)
Moderate sexual dysfunction	2(20.0 %)	6(60.0 %)	2(20.0 %)	10(100 %)
Severe sexual dysfunction	0(0.00 %)	5(55.6 %)	4(44.4 %)	9(100 %)
Total	9(17.0 %)	35(66.0 %)	9(17.0 %)	53(100 %)

It is observed that the rate of sexual dysfunction in the study group varied across the scale. Sexual dysfunction was noted highest in the antipsychotics group compared to others. From the results it can be concluded that, when psychotropic drugs given in more in numbers at a time then patient had noted changes in sexual activity (66%) in which 70.6%had mild form of sexual dysfunction on PRSexDQ-SALEX Table 3.

4. Discussion

The results reveal that when there is exposure to psychotropic in the patient, the changes are noticed in the sexual activity. In our study, it is observed that the prevalence of sexual dysfunction was noted highest in patient who was receiving antipsychotic drugs followed by antidepressants. The difference was not significant among the 4 groups when sexual dysfunction was elicited. This findings is similar to studies done by Kondrakonda et al[20] in past. Also found no difference in sexual dysfunction with use of different antipsychotics. Studies conducted by Lucca et al,[21] have also reported that the sexual dysfunction was more prevalent in patients who were on antipsychotic medications. Further, from the findings it can be concluded that all psychotropic medications cause sexual dysfunction when used alone or in combinations. There is similar finding from the earlier study by Veda N et al.[22]

There was no significant difference in the presence or absence of sexual dysfunction based on the various groups created based on the demographic variables. Furthermore the clinical diagnosis has not made any significant difference. It is well known that the course and symptomato logy of certain mental illness also affect sexual functioning of the patients; however the assessment of psychopathology was not the part of this study. The presence of sexual dysfunction in patient either due to medication or primary illness may lead to poor level of functioning. Hence identification and treatment of sexual dysfunction is important for better outcome of the disorder as well as to improve better quality of life. Sexual dysfunction is common problem among the patients who are receiving psychotropic medication. Erectile dysfunction is the most common type of sexual dysfunction among men and this is higher with antipsychotics than other psychotropic. Detailed sexual history during clinical follow-up interviews is essential with respect to drug compliance and disease prognosis.

4.1. Limitations of study

1. Smalla sample size.
2. There may be possibility that the incidence of sexual side effects might have been influenced by other medications the patients were taking other than those analyzed in the study.
3. We didn't compare non-psychotropic control group. Comparison with non-psychotropic control group may provide more information about the medications side effects.

5. Conclusion

Our study suggests, that the patients who receives the antipsychotics developed more sexual dysfunction than other groups. Treating doctor should take detailed sexual history as a routine clinical practice when prescribing psychotropic medications. With proper clinical assessment and management of psychotropic induced sexual dysfunction, the patient's compliance with medication and quality of life can be improved.

6. Source of Funding

None.

7. Conflict of Interest

None.

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