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Research Article

SLEEP PATTERN IN PSYCHIATRIC DISEASE IN OPD DEPARTMENT AT DISTRICT GENERAL HOSPITAL, AMRAVATI

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A R T I C L E   I N F O

A B S T R A C T

Background: Sleep disorders disturb the normal sleep pattern. Sleep disorder is a broad spectrum problem in medicine and psychiatric patients and is regarded as a distinctive feature of depressive disorders.

Method: A hospital-based prospective, observational study was conducted on 100 patients for 4 months at psychiatric out-patients department, District General Hospital, Amravati.

Result: Out of 100 patients 71 (71%) male and 29 (29%) female. Among 100 patients, the sleep disorder was distributed as insomnia in 44, parasomnia in 39, periodic limb disorder in 9, hypersomnia in 5, and circadian rhythm sleep disorder in 3 number of patients. Among 100 prescriptions, 169 drugs were prescribed as Olanzapine 35.50%, which is followed by Fluoxetine 20.71%, Clonazepam 13.60%, Imipramine 10.65%, Lorazepam 5.32%, Escitalopram 2.36%, Trihexyphenidyl 1.77%, Risperidone 1.77%, Chlorpromazine 1.18%, Carbamazepine 0.59% and Amitryptilline 0.59% and in combination of Trihexyphenidyl and Trifluoperazine 5.91%.

Conclusion: Sleep disorder was more common in male than female in the age group 31-45 years. Insomnia and parasomnia type was frequently seen with loss of interest or pleasure in daily activity feature in sleep disorders. Sleep disorder more prone to psychosis than other diseases. Olanzapine was frequently used in sleep disorder than SSRIs (selective serotonin reuptake inhibitors) and benzodiazepines.

INTRODUCTION

Sleep disorder disturbs the normal sleep pattern. Sleep disorder is a broad spectrum problem in medicine and psychiatric patients and is regarded as a distinctive feature of depressive disorders. Depressed patients often report as insomnia, frequent nocturnal and early morning awakening decreased total sleep and disturbing dreams however sleep-related complaints and electroencephalography (EEG) changes are generally encountered in psychiatric disorders. It can affect the health and quality of life in people. [Jeevan, 2019] Clinical manifestation of sleep disorder is unrefreshing, irritability, aggression, impulsive behavior daytime sleepiness, increase movement during sleep, irregular breathing. Sleep disorder is primary or maybe a psychiatric, medical condition or pharmacological condition. Primary sleep disorders caused due to a disturbance in the sleep cycle. Psychiatric disorders, significant psychosocial stressors, excessive alcohol use, and caffeine intake and nicotine use common causes of insomnia. Sleep disorder prevalently observes in older age patients. Older patient causes sleep disorder due to taking medication. Primary sleep disorder differentially diagnoses from a

secondary sleep disorder is significant to achieve the goal of treatment. Sleep disorder common types are usually insomnia, hypersomnia, parasomnia, circadian rhythm sleep disorder, and periodic limb movement disorder.

Humans normally have four to six cycles of non–rapid eye movement (NREM) and rapid eye movements (REM) sleep each night, 70 to 120 minutes require for each cycle. NREM sleep is a progression through the four stages. Stage 1 of NREM is the stage between wakefulness and sleep. Stage 3 and 4 sleep is called delta sleep (i.e, slow-wave sleep). In REM sleep, there is a low-amplitude, mixed-frequency electroencephalogram, increased electric and metabolic activity, increased cerebral blood flow, muscle atonia, poikilothermia, vivid dreaming, and variations in respiratory and cardiac rate. In the elderly, sleep is lighter and more fragmentize with more encouragement and a slow reduction in slow-wave sleep. Sleep is reduced when there is decreased serotonin activity or destruction of the dorsal raphe nucleus. REM sleep is turned on by cholinergic cells. Dopamine has an alerting effect. Neurochemicals involved in wakefulness include norepinephrine and acetylcholine in the cortex and histamine and neuropeptides in the hypothalamus. Polysomnography (PSG) is a procedure that measures multiple electrophysiologic parameters simultaneously during sleep

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(e.g., electroencephalogram, electrooculogram, and electromyogram) to characterize sleep and diagnose sleep disorders. [Vladyslav V*et al*, 2014] REM sleep accompanying sleep disturbances in psychiatric patients like major depressive disorder, bipolar mood disorder, generalized anxiety disorder, post-traumatic stress disorder, schizophrenia, and alcoholism. Hence efforts made to find psychiatric problems related to sleep disorders may end into suicidal ideation and completed suicide.

Objective

1. To evaluate psychiatric problems associated with sleep disorders.
2. To assess the pattern of sleep disorder in psychiatric patients
3. To find out the types of sleep disorder and clinical feature of sleep disorder patients attending a psychiatric out-patient department (opd).

METHODOLOGY

A hospital-based prospective, observational study was conducted on 100 patients for 4 months at psychiatric outpatients department, District General Hospital, Amravati.

Study Criteria

Inclusion Criteria

- Patients attended psychiatric out patients department.
- Patients of either sex.
- Patients suffering from a sleep disorder.
- Patients were willing to participate in the study.

Exclusion Criteria

- Patients were not willing to participate in the study.
- Patients who are not suffering from sleep disorders.
- Patients who had a past medical history of hypertension, diabetic mellitus, hypothyroidism, hyperthyroidism, HIV.

Source of Data

Prescriptions of patients diagnosed with any psychiatric illness attending psychiatric opd.
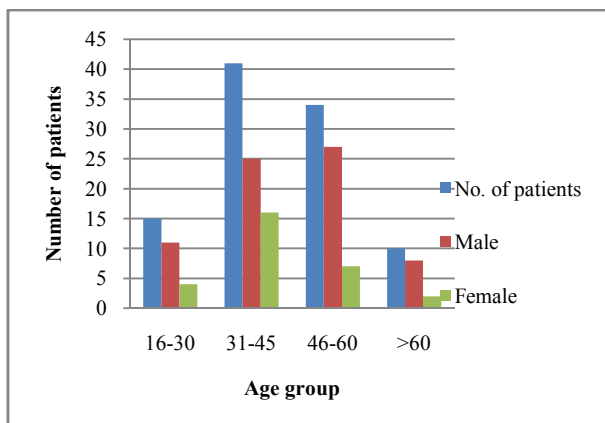
RESULT AND DISCUSSION

Figure 1 Demographics of patients

A total of 100 patients were included in the study, among them 71 (71%) male and 29 (29%) female who was diagnosed with psychiatric disorders. When observed on the basis of age, it

was found that the majority of patients in the age group of 31 to 45 years. This was followed by age group of 46to 60 years, 16 to 30 years and then above 60 years. Demographics of patients are shown in Figure 1. The prevalence rate of sleep disorder was more in male than female in the age group 31-45 years. Male was more prone to sleep disorder in 31-45 years may be due to environmental factor like stress, workload, lifestyle.

Out of 100 patients involved in the study, observed that patients belong to rural were 53 (53%) and patients belong to urban was 47 (47%). The locality of patients as shown in Figure 2. Patients from the rural side were attended psychiatric opd than urban patient. Rural patients may have less knowledge about sleep hygiene and not take counseling about sleep.
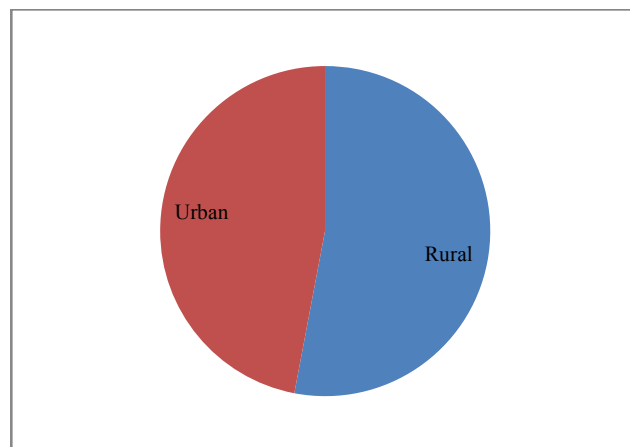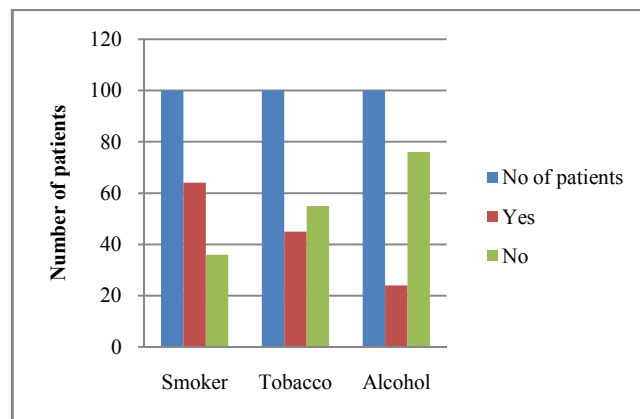

Figure 2 Locality

Figure 3 Social history

Out of 100 patients involved in the study, 74 (74%) patients were having a social history of smoking, tobacco chewing, and alcohol drinking. Out of which 64 (86.48%) patients were having a history of smoking, 45 (60.81%) patients were having a history of tobacco chewing and 24 (32.43%) patients were having a history of alcohol drinking as shown in Figure 3. The social habit was frequently present in patients of sleep disorder. The result showed that sleep disorders frequently cause due to an environmental factor. In the social habit of sleep disorder patients were having frequently smoking addiction.

Among 100 patients involved in the study, the sleep disorder distributed as 44 (44%) patients had insomnia, whereas 39 (39%) had parasomnia, 9 (9%) had periodic limb disorder, 5 (5%) had hypersomnia, and 3 (3%) had a circadian rhythm

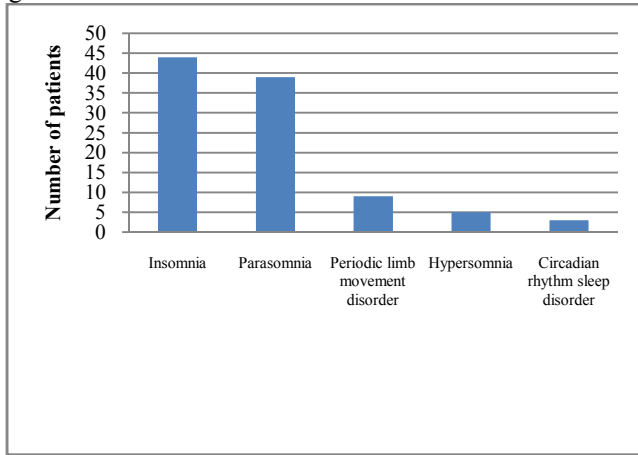sleep disorder. Profile of the type of sleep disorders shown in Figure 4.

Figure 4 Type of sleep disorder

Insomnia and parasomnia were higher prevalence rate in sleep disorders. The study conducted at Dhule showed that insomnia was present in 47.3% of cases of sleep disorder than other disorders. [Jeevan, 2019] Clinical features among 100 patients were presented with 27 patients had a loss of interest or pleasure in daily activity, 23 (23%) had a depressed mood, 19 (19%) had poor concentration or difficulty in making a decision, 14 had a feeling of guilt and worthlessness, 9 (9%) had fatigue, 4 (4%) had changed in appetite and 4 had suicidal ideation. Clinical features of sleep disorder patients as shown in Figure 5. Loss of interest or pleasure in daily activity feature of sleep disorders presented frequently in patients. It may lead to decreased quality of life and less work done by the patient. A study conducted at Dhule showed the depressed mood was common to occur in sleep disorder followed by loss of interest. [Jeevan, 2019]
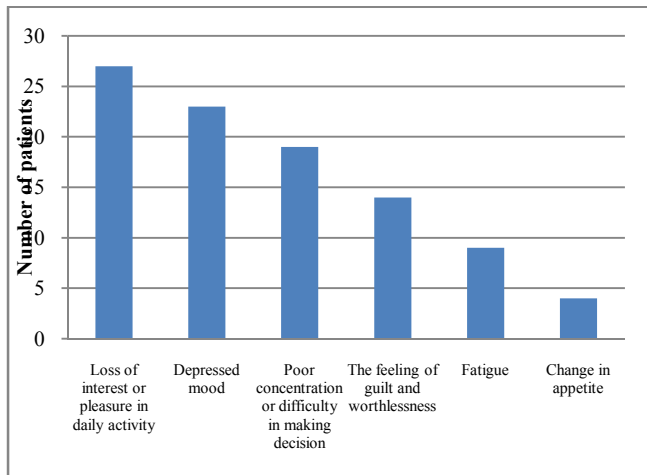

Figure 5 Clinical features of sleep disorder patients

Out of 100 patients involved in the study, 47 patients diagnosed with psychosis which is followed by 17 (17%) patients having a major depressive disorder, 12 (12%) having post-traumatic stress disorder, 6 (6%) having a mood disorder, 6 (6%) having major anxiety depression, 6 (6%) having a general anxiety disorder and 6 (6%) having alcoholism. Diagnosis-related to sleep disorder patients as shown in Figure 6.
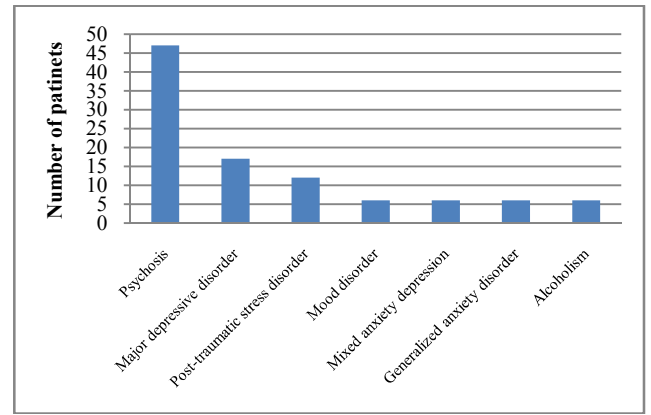

Figure 6 Diagnosis related to sleep disorder patients

The result was found that sleep disorder more prone to psychosis than other diseases. The study conducted by Sarah *et al* said that sleep disorder was more common with psychosis. These results were showed that huge bad effect in psychosis patients and need an evaluation of sleep pattern in psychosis patients. [Sarah *et al*, 2019]
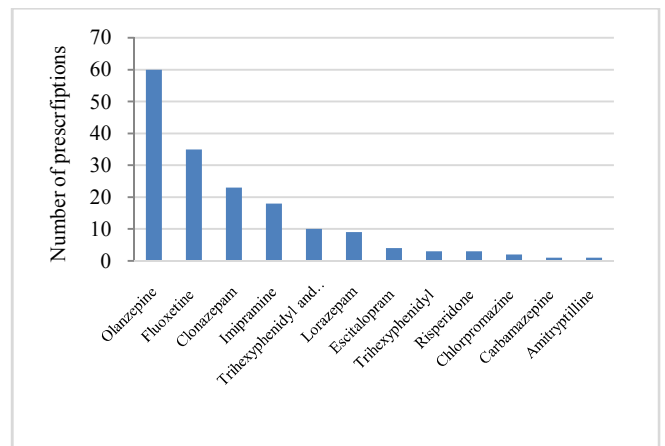

Figure 7 Drug utilization in psychiatric illness related to sleep disorder

Among 100 prescriptions, 169 drugs were prescribed. Out of which most commonly prescribed drugs were Olanzapine 60 (35.50%), which is followed by Fluoxetine 35 (20.71%), Clonazepam 23 (13.60%), Imipramine 18 (10.65%), Trihexyphenidyl and Trifluoperazine 10 (5.91%), Lorazepam 9 (5.32%), Escitalopram 4 (2.36%), Trihexyphenidyl 3 (1.77%), Risperidone 3 (1.77%), chlorpromazine 2 (1.18%), Carbamazepine 1 (0.59%) and Amitryptilline 1 (0.59%). Drug utilization in psychiatric illness related to sleep disorders as shown in Figure 7.

Olanzapine was frequently used in sleep disorder than SSRIs and benzodiazepines. Olanzapine increases sleep prolongation and increases slow wave to determine and also Olanzapine effective in SSRIs resistant patients. [sharpey *et al*, 2005]

CONCLUSION

Sleep disorder was more common in male than female in the age group 31-45 years. Rural patients were more common than urban patient in sleep disorder. The social habit was frequently present in patients of sleep disorder with common for smoking. Insomnia and parasomnia were frequently seen as a type of sleep disorders. Loss of interest or pleasure in daily activity feature of sleep disorders presented frequently in patients. Sleep disorder more prone to psychosis than other diseases.

Olanzapine was frequently used in sleep disorder than SSRIs and benzodiazepines.

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