

Pattern of Psychiatry Referral and Psychiatry Morbidity in Patients Admitted in Intensive Care Unit of Tertiary Care Centre: A Hospital Based Cross-Sectional Study

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Abstract

Context: The majority of patients hospitalised to intensive care units have psychiatric illness.

For a variety of diseases, such as delirium, substance abuse, and other mental illnesses, psychiatry consultations are sought. The majority of research focuses on the psychological morbidity among general hospital patients who have certain physical diseases.

Determining the pattern of psychiatry referral and psychiatric morbidity in patients hospitalised in Intensive care units (ICU) is the goal of this study.

Aim: To determine the Psychiatry Morbidity in patients admitted in Intensive Care Unit (ICU).

Setting And Design: This is a cross sectional observational study conducted in HSK Hospital, Bagalkot. The study included all the consecutive patients referred from different intensive care unit top sychiatry department for consultation during the three months period from January 1, 2022 to 31st march 2022.

Methods and material: Socio demo graphic details of study subjects were collected using a specially designed proforma. ICD-10 was used to diagnose the referred cases. Informed consent was taken from all the patients and/or relatives and also ethical clearance was obtained from the ethical committee of our college.

Statistical Analysis Used: Data was collected and Tabulated using Microsoft excel. Frequency and Percentages were calculated for all qualitative measures. Mean and Standard deviation was calculated for quantitative measures.

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Results: Among 64 patients, 73.4% were male [n=47] with a meanage of 41.92 ± 17.5 years, 40.6% had alcohol related disorders, 29.7% belonged to age group between 18 to 30 years, 12.5% of patients had comorbid neurological and gastrointestinal conditions.

Conclusion: Psychiatric morbidity compounds the disability and suffering in medical patients, increases the consumption of medical resources, complicates the treatment and results in poorer outcome.

This study shows that simultaneous treatment of both conditions may help to reduce cost of total treatment, investigations, and possibly prevent complications.

Keywords: Consultation Liaison Psychiatry, Intensive Care Unit, Psychiatry referral, Psychiatry Morbidity.

INTRODUCTION

When it comes to clinical activity and care, the intensive care unit (ICU) is a distinct organisational and geographical entity that works in tandem with other departments to meet the needs of all involved disciplines.¹ Following the poliomyelitis outbreak of the 1950s, there was a necessity of wide spread mechanical ventilation, that led to the development of the specialty of critical care medicine. The need for intensive care units (ICUs) in the modern health care system is undeniable, and the technology available to support the critically sick patient has advanced and gotten more complex.²

ICU is potentially a hostile environment resulting in multiple stressors for patients, including the existence of invasive procedures, a lack of privacy, the separation of family, immobility, discomfort, the frequent need for mechanical breathing, continual noise, in adequate directional cues, frequent sleep disturbances, and unfamiliar persons. It has been discovered that these factors contribute significantly to patients' high levels of anxiety and restlessness.³⁻⁵

The relationship between physical sickness and psychiatric morbidity is now widely acknowledged, but there was a wide range in how much psychiatrists were involved in the care of in patients in general hospitals until the rise of consultation liaison psychiatry in the 1960s, particularly in the United States, which changed the trend.⁶

The psychiatrist serving in consultation-liaison focuses mostly on details of the patient's history, clarifies pertinent queries, and documents the findings in a patient consultation report for future use as a guide and for follow-up. Following a patient review, the psychiatrist provides both psychotropic and non-psychotropic therapy if necessary, and may also hospitalise or refer the patient for psychiatric out patient follow-up.⁷

Compared to hospital inpatients with merely medical illnesses, individuals with psychiatry comorbidity are more likely to use healthcare

resources. According to one study, patients with psychopathology and pain required more procedures, spent longer in the hospital, and paid higher medical bills.⁸ Studies have found out that the prevalence of mental disorder in chronically physically ill patients is around 42% compared to 33.0% who did not have long term physical disability.⁹ The incidence of mental disorders in hospitalized physically ill patients has been found to range from 5.0% to 50.0%.¹⁰

Most research on the psychiatric morbidity in the general hospital is related to general medical patients with specific physical disorders. There is a lack of literature on the prevalence of psychiatric morbidity in patients admitted to the Intensive Care Units, hence this study seeks to determine the same.

MATERIALS AND METHODS

Study was conducted in HSK (Hangal Sri Kumare shwar Hospital) attached to Sri Nijalingappa medical college, Bagalkot. This study included all the consecutive patients referred from different ICUs to psychiatry department for consultation, during three months period from January 1, 2022 to march 30, 2022. It is a cross-sectional descriptive study which was under taken to look at the pattern of psychiatry referral and psychiatry comorbidity in ICU patients in a multispecialty hospital. Socio demo graphic details of study subjects were collected using a specially designed proforma. ICD-10 was used to diagnose the referred cases. Informed consent was taken from all the patients and/or relatives and also ethical clearance was obtained from the ethical committee of our college.

RESULTS

A total of 64 patients were referred during the study period out of which 47[73%] were male and 17[27%] female patients, mean age of study population being 41.94 ± 17.55 years. Most of the patients referred were between the age group 18 to 30 years[n=19, 29.7%], 30% [n=20] each belonging to middle class and lower class. 28% [n=18] of the patients had completed 12th standard, 21% [n=14] of patients were farmers, 70% [n=45] of patients were married and living with spouse, 92% [n=59] of patients belonged to Hindu religion and 67% [n=43] of them from rural area. In 32% [n=10] of patients family h/opsychiatric illness was positive. Duration of illness was less than 1 month in 42% [n=27] of the patients, and 42% [n=27] of patients had age

at on set of illness between 18 to 30 years. The principle diagnosis in majority of patients admitted in ICU was neurological [n=12, 18%] followed by gastrointestinal conditions [n=8, 12.5%]. Majority of the patients referred to psychiatry department had alcohol related disorders [n=26,40%], intentional self-harm [n=13, 20%], delirium due to medical condition [n=11, 17%] and depression [n=4, 6%].

Table 1: Socio-demographic variables of referred patients (Age, Gender, SES, Education)

Socio-demographic variables	Frequency (n %)
Age of Study Population	
<18 years	2,[3.1%]
18 to 30 years	19,[29.7%]
31 to 40 years	14,[21.9%]
41 to 50 years	10,[15.6%]
51 to 60 years	6, [9.4%]
61 to 70 years	10, [15.6%]
71 to 80 years	2, [3.1%]
81 to 90 years	1, [1.6%]
Gender	
Male	47, [73.4%]
Female	17, [1%]
Socio-economic Status	
Upper SES	3, [4.7%]
Middle SES	58, [90%]
Lower SES	3, [4.7%]
Education	
Illiterate	3, [4.7%]
Primary [1 to 5]	4, [6.3%]
School [6 to 10]	14,[21.9%]
Higher secondary	17, [26.6%]
Graduate	17, [26.6%]
Post graduate	8, [12.5%]

Table 2: Socio-demographic variables of referred patients (Occupation, marital status, Religion, Residency, Family history of mental illness)

Socio-demographic variables	Frequency (n %)
Occupation	
Unemployed	3, [4.7%]
Homemakers	7, [10.9%]
Farmers	14, [21.9%]
Unskilled	7, [10.9%]

Semi-skilled	11, [7.2%]
Skilled	5, [7.8%]
Clerical	1, [1.6%]
Professional	4, [6.3%]
Business	3, [4.7%]
Student	7, [10.9%]
Others	2, [3.2%]

Marital Status

Single, never married	13, [20.3%]
Married, living with spouse	45, [70.3%]
Married, separated	3, [4.7%]
widowed	3, [4.7%]

Religion

Hindu	59, [92.2%]
Muslim	5, [7.8%]

Residency

Urban	43, [67.2%]
Rural	20, [31.3%]

Family History of Mental Illness

None	44, [68.8%]
Schizophrenia d/o	2, [3.1%]
Depression d/o	3, [4.7%]
Anxiety d/o	1, [1.6%]
Intentional self-harm	2, [3.1%]
Substance abuse	11, [17.2%]
Others	1, [1.6%]

Table 3: Other variables of referred patients (Duration of illness, Age at onset, Medical illness)

Variables	Frequency [n %]
Duration of Illness	
Less than 1 month	27 [42.2%]
1 month to 1 year	7 [10.9%]
1 years to 5 years	4 [6.3%]
6 years to 10 years	12 [18.8%]
11 years to 20 years	9 [14%]
More than 20 years	5 [7.8%]
Age at onset	
<18 years	7 [10.9%]
18 to 30 years	27 [42.2%]
31 to 40 years	10 [15.6%]
41 to 50 years	6 [9.4%]
51 to 60 years	4 [6.4%]
61 to 70 years	7 [10.9%]

Table Cont.....

71 to 80 years	2 [3.1%]
81 to 90 years	1 [1.6%]
Medical Illness	
Cardiac illness	4 [6.3%]
Respiratory illness	3 [4.8%]
Neurological illness	12 [18.2%]
Gastrointestinal illness	8 [12.5%]
Endocrine d/o	7 [10.4%]
Vascular d/o	4 [6.3%]
none	26 [40.6%]

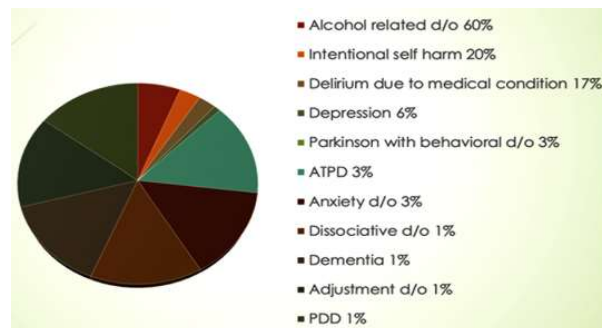


Fig. 1: Pie chart showing distribution of psychiatry illness among the patients referred from Intensive care unit.

DISCUSSION

According to a study conducted in teaching hospital of Nepal, the mean age of referred patients was 36.87 ± 12.81 years and 97% were Hindus which is similar to the findings in our study [mean age 41.94 ± 17.55 years and 92% Hindus], however majority of the study population belonged to urban background but in our study patients were mainly from rural background.¹¹ According to a study conducted by Nongmeikapam et al. maximum participants were noted in the age group 30 to 50 years and had completed 12th standard which was similar to findings in our study [24% of patients between 30 to 50 years and 28% had completed 12th standard], however females constituted the majority population having psychiatric illness which is in contrast with our study.¹² The principal diagnosis in patients of our study is gastrointestinal and neurological condition which is in contrast with the study conducted by Sim et al.^[13] in which cardiac and respiratory conditions were more common. This could be because all the patients who were admitted in ICU were assessed by the psychiatrist in a study conducted by Sim et al, but in our study only patients who were referred to psychiatry department were assessed.

Most common psychiatric diagnosis among the patients referred was Alcohol related disorders accounting to about 40% of referrals in our study. In most of the studies the prevalence of alcohol related disorders in patients admitted in intensive care unit was between 10 to 25 percentage.^{11,14-16} Studies in northern India found the 1 year prevalence of alcohol use to be between 25% and 40%.¹⁷⁻¹⁹ In southern India, the prevalence of current alcohol use varies between 33% and 50%, with a higher prevalence among the lesser educated and the poor.²⁰ In one study Alcohol related problems made up 17.6% of the case load of psychiatric emergencies in an Indian general hospital.²¹ Given all of this information, it shouldn't come as a surprise to learn that 40% of our study population who were referred to psychiatry department from the ICU were diagnosed with alcohol related illnesses.

Young people appear to be more likely than all other age groups to commit suicide, and this trend appears to be true in both developed and developing nations.²² Suicide is one of the top three leading cause of death among people aged 15 to 44 world wide. Prevalence study in India showed between 4-12% of the general population have made at least one attempt and the repetition rate (persons who attempt suicide again) is 50%.^{23,24} Intentional selfharm was next most common psychiatry diagnosis present in 20% of patients referred to psychiatry department in our study. These results were similar to studies conducted by Poudel R, Belbase M and Bhogale et al.^{11,15} This outcome is not unexpected because, in a private hospital setting like ours, practically every attempted suicide case should be sent to a psychiatrist for legal reasons. A contributing factor to its prevalence may be Bagalkot's small size and undeveloped local population, with the majority of its residents being from the middle and lower classes. Patients from these socio economic classes may be more likely to attempt suicide.²⁵

The prevalence of delirium among medical and surgical ICU patients varies from 20% to 80%. Recorded rates depend upon the severity of illness and the method used to diagnose delirium.²⁶ The prevalence of delirium due to medical condition in our study is 17% which is similar to other studies conducted on ICU population to assess psychiatry illnesses.^{11,15} Delirium in ICU settings is associated with worse outcomes including self-extubation and removal of catheters²⁷ prolonged hospitalization, increased costs²⁸, higher 6-month mortality²⁹, and potentially, long term cognitive impairment.³⁰ Despite the high prevalence of delirium and the

increasing publications in the last years, delirium remains unrecognized by the majority of clinicians. Prevalence of depression and anxiety in our study is 6% and 3% respectively which is very less when compared with other studies.^{31,11-15}

Our medical colleagues have not received any orientation or exposure to psychiatry training and education right from their undergraduate years and also there was dearth of liaison psychiatry hospitals in those days and hence they find it difficult to recognize psychiatry comorbidity in a medical condition patient. Similarly stigma of mental illness that exists among patients and physicians, self-esteem of patients and Physician being not sure of how rewarding such referral could be are some of the contributing factors for low referral rates to psychiatrists.¹⁵ In a prior research by Rothenhäusler et al.³² it was shown that with time, the involvement of clinical psychologists and experts in psychosomatic medicine increased, leading to an increase in psychiatric referrals. Clinical psychologists and psychosocial workers were present in our institution during the research time.

Like highlighted in the introduction there are many factors in the environment of ICU which themselves are responsible for some of the psychiatry comorbidities especially delirium. Certain changes in the atmosphere of ICU can alleviate the psychiatry comorbidities. Some of these changes include, limiting the uncalled for noise from nursing station, using dim lights in ICUs and Reducing the volume of alarms, telephones, and intercoms especially during night time, the ICU design should be such that it minimizes noise pollution, patients can be provided earplugs, temperature control and single rooms for each patient with constant vigilance will preserve dignity of patients and allows privacy.

This study is first of its kind in this region where we made an attempt to see the prevalence of psychiatry morbidity in ICU.

There were certain restrictions that needed to be highlighted because this study was done on ICU patients who were referred for psychiatric evaluation. First, non-referred patients who could have had psychiatric symptoms were not included in our research. Second, its external validity is further constrained because it was a single centre research. Third, 64 consecutive patients referred were accessed which lacked a system of randomization of the sample. Fourth, the sample size of the study is small.

CONCLUSION

Our study suggests that most common psychiatry comorbidity in ICU patients are alcohol related problems and intentional self-harm which are also the core psychiatry conditions that we encounter in our daily practice. This should provoke the treating team in ICU to do detail assessment of each and every patient or it is actually preferred to evaluate each patient in ICU by a consulting psychiatrist irrespective of whether the patient is referred or not.

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