



## PSYCHIATRIC MORBIDITY AMONG THE PATIENTS OF THE INTENSIVE CARE UNIT

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**ABSTRACT** **Background:** Psychiatric morbidity complicates medical treatment in ICU settings resulting in poorer outcome, increases the consumption of medical resources and compounds the disability and suffering in medical patients.

**Aims:** To find psychiatric morbidity among the patients of the intensive care unit (ICU).

**Materials & Methods:** The present observational, cross-sectional study was conducted among the patients admitted in various ICU's of Government Medical College, Jammu and its associated hospital over a period of 6 months. All those patients of ICU seeking psychiatric consultation were included in the study, after which a total of 162 patients were selected. All the patients were diagnosed according to ICD 10.

**Results:** In the present study, 71.6% patients were from MICU, 22.2% were from SICU and 6.2% were from ICCU. About 66% patients had hypertension, 51.5% patients have diabetes, 37.1% patients were smokers and 26.5% patients were alcoholics. As per psychiatric morbidity, 52.5% patients were suffering from delirium, 25.3% from depression, 14.8% from anxiety disorders, 3.1% from psychotic illnesses and 4.3% were from other psychiatric disorders.

**Conclusion:** From the present study, it has been concluded that the psychiatric morbidity is common among the patients admitted to the intensive care unit. Hence there is urgent need for creating awareness of psychiatric comorbidity so that simultaneous treatment of both conditions may help to reduce cost of investigations, treatment and possibly prevent complications.

**KEYWORDS :** Delirium, Depression, ICU.

### INTRODUCTION:

With recent development in critical care medicine more number of patients are being admitted and surviving in the intensive care units (ICU). The rate of survival in the critical illnesses has been increased by ICU care but ICU therapies and critical illness exposes patients to enormous stressors which includes discomfort with endotracheal tube suctioning, limited ability to communicate and reduced autonomy, activation of the inflammatory cascade, respiratory insufficiency, administration of exogenous catecholamines, and delirium with associated psychotic experiences.<sup>1</sup> Patients admitted in ICU may experience psychological distress with increasing development of psychological illness and morbidity related to psychological disorders. Among the critically ill patients admitted in ICU, those who had undergone prolonged mechanical ventilation or had been admitted for severe trauma and sepsis may have worst quality of life. Further ICU admission for major trauma may represent an additional risk factor because of the acutely stressful trauma experience. There are many factors which are associated with psychological distress among the patients of ICU which includes duration of mechanical ventilation and ICU stay, personality traits, pain memory, age, sex, educational and employment status.<sup>2</sup>

Psychiatric morbidity complicates medical treatment resulting in poorer outcome, increases the consumption of medical resources and compounds the disability and suffering in medical patients. Hence the knowledge of the overall prevalence of psychiatric morbidity was important as a basis for service planning and resource utilization in the general hospital. In Indian set ups there is a lack of literature on the prevalence of psychiatric morbidity in patients admitted to the intensive care units.<sup>3</sup> Hence this study was conducted to find psychiatric morbidity among the patients of the intensive care unit (ICU).

### Methodology

The present observational, cross-sectional study was conducted

among the patients admitted in various ICU's of Government Medical College, Jammu and its associated hospital over a period of 6 months from november 2018 to april 2019. All those patients of ICU seeking psychiatric consultation were included in the study whereas other patients were excluded, after which a total of 162 patients were selected for the study. All the patients were diagnosed according to ICD 10.<sup>4</sup>

### Statistical analysis:

Analysis of data was done using statistical software MS Excel / SPSS version 17.0 for windows. Data presented as percentage (%) as discussed appropriate for quantitative and qualitative variables

### OBSERVATIONS AND RESULTS

Table 1 shows that out of total 162 psychiatric referrals, 71.6% were from medical intensive care units (MICU), 22.2% were from surgical intensive care units (SICU) and 6.2% were from intensive cardiac care units (ICCU).

Table 2 shows that 66% patients had hypertension, 51.5% patients have diabetes, 37.1% patients were smokers and 26.5% patients were alcoholics.

Table 3 shows that 52.5% patients were suffering from delirium, 25.3% from depression, 14.8% from anxiety disorders, 3.1% from psychotic illnesses and 4.3% were from other psychiatric disorders.

### DISCUSSION

During present times there are increasing trend of multispecialty hospitals where many departments work in collaboration with each other under one roof for the betterment of patients.<sup>4</sup> Patients in intensive care units may experience recurrent, acute and often overwhelming and multiple stressors resulting in stress and negative emotions which causes both immediate as well as long-term effects on

patients' psychological and physical well-being.<sup>3</sup> Hence this study was conducted to find psychiatric morbidity among the patients of the intensive care unit (ICU).

In the present study 71.6% patients were from MICU, 22.2% patients from SICU and 6.2% patients were from ICCU. There is high prevalence of psychiatric morbidity among the patients admitted in medical intensive care units (MICU) as compared to the general population.<sup>3</sup> Our finding is in agreement with Bhogale GS et al who also found that 78.96% patients were from MICU.<sup>4</sup>

In the present study delirium was the most common diagnosis and was present among 52.5% of patients. Delirium is acute medical emergency which occurs rapidly among patients admitted in ICU settings.<sup>6</sup> Majority (66%) patients in this study had a history of hypertension which is strongly linked to the development of delirium.<sup>6</sup> One of the feature of hypertension is vascular diseases which causes cerebral hypoperfusion and cerebral cellular hypoxia which is associated with development of delirium.<sup>7</sup> 37.1% patients in our study had a history of smoking and sudden smoking cessation in ICU settings may have resulted in nicotine withdrawal delirium.<sup>8</sup> 26.5% patients in this study were alcoholics and admission to ICU had caused sudden cessation of alcohol which may have resulted in alcohol withdrawal delirium.<sup>7</sup> Lab abnormalities among ICU patients may be associated with development of delirium. Raised bilirubin may be associated with hepatic dysfunction due to cirrhosis and are directly related to delirium.<sup>9</sup> Sodium abnormalities which occurs due to heart failure, pharmacological agents and in postoperative patients are significantly associated with development of delirium.<sup>10</sup> Moreover 51.2% patients in this study were diabetics and hypoglycaemia in ICU diabetic patients may have caused delirium.<sup>11</sup> Benzodiazepines and propofol are used frequently as sedative agents in ICU and use of benzodiazepines regardless of its dosages were considered a risk factor for the development of delirium.<sup>7</sup> The use of opiates regardless of its dosage in ICU settings was strongly associated with development of delirium.<sup>12</sup> Moreover various modes of administering drugs such as epidural route in postoperative cases have strong association with delirium.<sup>13</sup> Our finding is in agreement Bhogale GS et al who observed delirium in 32.69% patients of ICU.

The second most common diagnosis in our study depression. There is significant physical limitations during recovery among ICU survivors. Depressive symptoms are a potential concern in ICU survivors. As depression carries a risk of suicide and delays in return to work, recognition of depressive symptoms following critical illness is important.<sup>14</sup> Depression in ICU patients can be due to neuronal changes in the context of critical illness,<sup>15</sup> illness-induced cognitive impairment,<sup>16</sup> ICU hypoglycemia<sup>17</sup> and there are increased risk for depression following episodes of delirium.<sup>18</sup> Our finding is in accordance with Davydow DS et al who observed that 33% patients when discharged from ICU were depressed.<sup>14</sup>

Other psychiatric conditions which were found were anxiety disorders (14.8%), psychotic illnesses (3.1%) and other psychiatric illnesses (4.3%) were consistent with other studies.<sup>4</sup>

**CONCLUSION**

From the present study it has been concluded that the psychiatric morbidity is common among the patients admitted to the intensive care unit. The most common was delirium followed by depression, anxiety and other disorders. Due to the urgency of treatment of primary medical condition accompanying psychiatric problems are usually neglected. Hence there is urgent need for creating awareness of psychiatric comorbidity so that simultaneous treatment of both conditions may help to reduce cost of investigations, treatment and possibly prevent complications.

**Table 1 shows distribution of patients according to type of ICU**

Type of ICU	Number of patients	Percentage
MICU	116	71.6
SICU	36	22.2
ICCU	10	6.2%

ICU – Intensive care unit; MICU – Medical intensive care unit; ICCU – Intensive cardiac care unit; SICU – Surgical intensive care

**Table 2 shows distribution of patients according to comorbid medical condition and substance abuse**

		Number of patients	Percentage
Comorbid medical condition	Hypertension	107	66
	Diabetes	83	51.2
Comorbid substance abuse	Smoking	60	37.1%
	Alcohol	43	26.5

**Table 3 shows distribution of patients according to psychiatric diagnosis**

Psychiatric diagnosis	Number of patients	Percentage
Delirium	85	52.5
Depression	41	25.3
Anxiety disorder	24	14.8
Psychotic illnesses	5	3.1
Others	7	4.3

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