TO STUDY CLINICAL PROFILE OF ACUTE CONFUSIONAL STATE IN A TERTIARY CARE HOSPITAL IN A HILLY AREA.

Internal Medicine

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ABSTRACT

Acute confusional state/Delirium is a condition that develops quickly (usually over hours or days) and involves changes in consciousness, attention, cognition (thinking and reasoning), and perception. Delirium is usually temporary and reversible and does not reflect a persistent psychiatric disorder.¹ Delirium may result from a general medical condition, from use of drugs or similar substances, or from withdrawal from these substances. Some researchers suggest that there are two forms of delirium: *hyperactive* (agitated) and *hypoactive* (lethargic). If individuals with delirium experience the hyperactive form, they may be more prone to hallucinations, delusions, agitation, and disorientation. The rate is higher in elderly persons, those with cancer, and those with acquired immunodeficiency syndrome (AIDS). Patients who have had an operation (especially heart surgery, hip surgery, and organ transplants), as well as patients with burns, dialysis, or central nervous system lesions, are at increased risk for delirium. It is very common in individuals with terminal illnesses, often occurring just before death.⁴ we conducted this study to see the aetiological profile of Acute Confusional State in patients admitted in medical wards in IGMC Shimla and to study the behavior pattern of such patients.

KEYWORDS

Delirium, acute confusional state, hypoactive, hyperactive

INTRODUCTION:

Acute confusional state/Delirium is a condition that develops quickly (usually over hours or days) and involves changes in consciousness, attention, cognition (thinking and reasoning), and perception. An individual's degree of difficulty in these areas may be greater or less over the course of the day, but overall, delirium represents a sudden and significant decline from the previous level of functioning. Delirium is usually temporary and reversible and does not reflect a persistent psychiatric disorder.¹ Delirium may result from a general medical condition, from use of drugs or similar substances, or from withdrawal from these substances. Sometimes there is more than one cause of delirium, and sometimes the cause cannot be determined.² Persons with delirium may have a reduced awareness of their surroundings. Some researchers suggest that there are two forms of delirium: *hyperactive* (agitated) and *hypoactive* (lethargic). If individuals with delirium experience the hyperactive form, they may be more prone to hallucinations, delusions, agitation, and disorientation. If they have hypoactive delirium, they may be confused and tired but not have hallucinations, delusions, or illusions. It is possible to have features of both forms of delirium. Emotional disturbances may take the form of anxiety, fear, depression, irritability, anger, euphoria (an unrealistic or exaggerated feeling of happiness or well-being), or apathy.³ About 10% to 30% of hospitalized medically ill individuals develop delirium. The rate is higher in elderly persons, those with cancer, and those with acquired immunodeficiency syndrome (AIDS). Patients who have had an operation (especially heart surgery, hip surgery, and organ transplants), as well as patients with burns, dialysis, or central nervous system lesions, are at increased risk for delirium. It is very common in individuals with terminal illnesses, often occurring just before death.⁴

Delirium can last from less than a week to more than 2 months, but usually symptoms disappear within 10 to 12 days. Sometimes symptoms such as restlessness, anxiety, irritability, distractibility, or sleep disturbance may occur 1 to 3 days before the full onset of the disorder.³ Elderly persons are more likely than younger ones to have symptoms of delirium that last for more than a month. The primary treatment for the symptoms of delirium is medication. The specific features of the individual's condition, the underlying cause or causes of the delirium and the existence of other associated medical conditions are used by the physician to determine which medications are likely to work best. The majority of individuals with delirium are treated with an antipsychotic medication. This may be used alone or combined with a benzodiazepine. Other medications and physical interventions that

may be used for particular kinds of delirium include cholinergics, vitamins, opiates, and other treatments as needed.

Aims and Objectives:

- To study the aetiological profile of Acute Confusional State in patients admitted in medical wards in IGMC Shimla.
- To study the behavior pattern of such patients.
- To study the prevalence of Acute Confusional State in different age group & sex.

Material Methods:

This was a prospective study, was done on 100 patients in the department of medicine IGMC Shimla. The study group included-

- First hundred patients admitted in the medical ward with acute confusional state.
- They were examined within forty eight hours of admission.
- Diagnosis of Acute Confusional State was done by using DSM-4 Criteria's. (Appendix-3)
- Severity was assessed by Delirium Rating Scale. A cut-off score of 10 or greater has been taken as indicating delirium.
- Patients with following conditions were excluded-
- Pediatric age group.
- Patients with head injury.
- Patients with psychiatric history for which they were on narcoleptics treatment.
- Patients with documented dementia.

A careful history from a reliable person who knew the patient well was taken. History included altered behavior, duration & course of illness, prior illness, medication list, base line level of function, whether the patient suffered confusional episode before & whether he or she recovered.

- Feature of confusion were elucidated i.e. is patient wakeful, alert or sleepy, agitated or calm, aphasic or with normal language & speech.
- Alcoholic history was assessed.

Examination of the patient was done in detail to consider diseases of virtually any organ system with special emphasis on neurological examination. Following investigation were done to see aetiology:

- Venous samples were collected aseptically & sent for biochemistry investigation & complete hemogram, CXR, ECG and Other relevant investigation like-

CT Head, CSF, ABG, TFT or any other investigation, were done as per indication. All patients were reviewed in between & before the time of discharge.

Statistical Analysis: Relevant statistical tests were used. P value was considered <0.05 as significant.

RESULTS:

Total admissions in medical ward in IGMIC during the study period were 2710 patients. (Study period-November2005 to August 2006). Total of patients number of acute confusional state were 100 during this period. Incidence of acute confusional state was 3.69 %. Total number of male patient in medical ward during the study period were 1624 (64%), total number of male patients with acute coronary syndrome(ACS) were 64 (3.94%). Total number of female patients in medical ward during the study period were 1077 (36%). Total no. of female patients with ACS were 36. (3.34%). Male to female ratio was 1.8:1. Fifty one percent were below the age of 45 yrs, 28% were between 46-64 yrs. & 21% were of and above 65 yrs. Most of the cases (58%) were of mixed behavior followed by hypoactive (23%) and hyperactive (19%). Analysing perception impairment 74% were without hallucination and only 26% had hallucination.

Table 1: Distribution of cases according to Delirium Rating Score (DRS)

Delirium Rating Score	No. of cases	Percentage
≤ 12	22	22
13-15	54	54
> 15	24	24

Figure 1

In our study 54% have DRS from 13-15, 24% have >15 & 22% have ≤ 12. (Table1, Figure 1)

Figure 2

In our study infection was the most common cause (41%), followed by CVA (18%), hepatic encephalopathy (8%), & electrolyte disturbance (7%). Meningitis was the most common presentation followed by encephalitis & brain abscess in CNS causes. In Stroke ten cases were of haemorrhage & eight were of infarct. Three cases were of acute gastroenteritis, 2 were of CKD & 2 were of DKA. (Figure2)

Table 2 Outcome of the patients

Outcome	No. of cases	Percentage
Fully recovered	81	81
Expired	5	5
DOR	5	5
Referred to other institutions	9	9

81% patients recovered fully from ACS, 5% were discharged on request and 9% were referred to higher institution. (Table 2)

DISCUSSION:

Acute confusional state is a complex neuropsychiatric syndrome with an acute onset, characterized by disturbances of consciousness, attention, cognition and perception. It can be found in many medical conditions and is a frequent and common syndrome in hospitalized patients. It often goes undetected in patients admitted to medical wards because of its fluctuating course and subtle presentation. The condition may be responsible for increased hospital stay & increased mortality if not treated early.² In the present hospital based study incidence of ACS was 3.69% in total, males were 3.04% and females were 3.34%. It is closely comparable to the study conducted by Helen et al and to the observation of Najma Siddique et al. However it is less in comparison to the incidence found in studies conducted in elderly patients by Cole et al, Inouye et al & Michel et al. The reason for the incidence of ACS to be in lower side in our study may be that we have included all age groups and ACS is higher in elderly in comparison to younger age groups. Most of the patients 50% were from 31-60 years age group in a study conducted by Afonso Carlos et al.⁶ In a study conducted by Prem K et al 44(78%) were below the age of 65 years and 12 (22%) were above 65 years of age.⁷ In our study also 56% patients were from 31-60 years age group and 79% were up to 65 years of age. These results are similar to the results of other studies.

Michel Elie et al screened 447 patients in elderly emergency department for confusional state and found it in 43 (9.6%). Among 43 delirious patients 19 (44%) were males & 24 (56%) were females.⁸ Helen C Kales et al conducted a retrospective study & examined delirium and related confusional diagnoses recorded in patients older than age 60 years discharged from Veterans Affairs (VA) acute inpatient units nationally in 1996. Only 4% had related confusional diagnoses. Females were 52.9% of ACS patients.⁹ In a study conducted by Johanna et al 50% of ACS patients were males.³¹ In our study 64% were men and 36% were women. These results are similar to the study of Prem K et al. Male preponderance in our study can be explained on the basis that most of the patients attending our OPDs are men as women in our patriarchal society has less accessibility to health institution particularly in rural areas.

Josh et al studied motor subtypes of delirium in 614 critically ill patients. They found that mixed type was the commonest type (54.9%), followed by hypoactive delirium (43.5%) and purely hyperactive delirium (1.6%).³ Shaun et al studied delirium subtypes in older people. 21% had hyperactive delirium, 29% had hypoactive, and 40% had mixed type.¹⁰ Sendberg et al studied profile of delirium in older people and found 26% as hypoactive, 22% as hyperactive and 42% as mixed type.¹¹ In our study similar results were found. 23% were hypoactive, 19% were hyperactive and 58% were mixed type. Patients of ACS may present with or without hallucinations. Prem K et al found in his study that 30.4% have hallucinations and 69.6% did not have it.⁶³ In our study 26% have hallucinations and 74% did not have it, almost similar results to the above said study.

The sleep/wake cycle is always disturbed, with marked period of drowsiness, sleep in the day, and insomnia in the night.¹² In our study all patients had disturbed sleep wake cycle. 53% had altered sleep pattern, 39% had decreased sleep pattern and 8% had increased sleep pattern. In our study infection (CNS)-41% was the most common cause, followed by CVA-18%, hepatic encephalopathy-8%, fluid and electrolyte imbalance-7%, ICSOL-5%, alcohol withdrawal -3%, postictal -5%, hypoxia-4%, drug induced (INH psychosis)-2% and CAD -1%. These results were similar to the results of other studies. In our study it has been found that in among young age group infection (CNS)- 73% is the commonest cause and in elderly CVA- 61% is the commonest cause of ACS. ACS increases the mortality of the patients. Eight percent patients died in hospital in a study conducted by Melissa et al.¹³ Eighteen percent patients died during hospitalization in a study conducted by Levkoff et al.¹⁴ In our study 5% died in hospital, & they were having high delirium score between 14-16, 5% were discharged on request by the attendants and 9% were referred to higher institution for further neurosurgical intervention.

CONCLUSION:

Patients of ACS formed a significant proportion of total patients admitted in medical wards. There was male preponderance among patients. Most of the patients were from 20-60 years of age group. Mixed behavior pattern was the most common type followed by hypoactive type. Hyperactive was the least common. Majority of the patients were having altered sleep pattern (53%). Only 26% were

having hallucinations. Infection (CNS) was the most common etiology of ACS (41%), followed by CVA (18%), hepatic encephalopathy (8%) & fluid and electrolyte disturbance (7%). Further in younger age (≤ 45 yrs) group, infection was the most common cause & in older age group (≥ 65 yrs) CVA was the most common cause.

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