

Clinical and etiological study of patients with non-traumatic altered sensorium

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Abstract

Background: Non traumatic altered sensorium is an emergency requiring medical or surgical intervention Due to the heterogeneity of the causes of non- traumatic coma, prediction of outcome in these patients is difficult, and unfortunately, no clinical, laboratory or electrophysiological parameter exists to determine their outcome.

These factors prompted me to study the clinical profile of patients with non- traumatic coma, who get admitted in Govt. General Hospital, GUNTUR with an objective to have a systematic clinical approach to such patients.

Aims and objectives:To study the etiology and outcome in patients with non-traumatic altered sensorium

Materials and methods:This study is an observational study conducted on 50 patients presented in a comatosed condition, without any trauma history to government general hospital Guntur

Results: The structural causes non-traumatic coma constituted 59% of the total patients as compared to only 35 % of the patients with a metabolic causes of coma.6% of which are due to drugs and toxins.The present study patients presented without focal neurological deficit are 56% among them 35.71% died.

Conclusion: Structural brain diseases leading to coma carried a poorer prognosis than those conditions which caused diffuse affection of the brain. Uraemic coma, amongst metabolic causes of coma, carried the poorest prognosis. Poor Glasgow coma score (< 6) at the onset of coma, carried a bad prognosis. Cerebro-vascular accidents were the commonest causes of non-traumatic coma. Neuro-infective causes and toxin and drug-induced causes of coma have a better prognosis.

Keywords: Non-Traumatic Coma, Glasgow Coma Scale, Oculocephalic Reflex.

Introduction

The term “COMA” in Greek means “Deep Sleep”. Assessment of coma patient is always an emergency. Firstly, to identify and correct the cause of coma. Secondly, to identify, the pathological mechanisms causing the degree of brain failure and prevent the brain from the development of irreversible damage. Thirdly, to identify those patients in whom the Prognosis is hopeless and for whom the institution of modern resuscitative measures will be inappropriate and serve only to increase and prolong the anguish of the relatives of the patient.

Aims and objectives

To study the etiology and outcome in patients with non-traumatic altered sensorium

Materials & Methods

Patients presenting with a comatose condition with no history of any trauma and undergoing investigations in Govt. General Hospital, Guntur in Acute medical care unit and throughout one year from OCTOBER 2020 to OCTOBER 2021. 50 cases sample size was calculated by taking 80% of the average of similar cases admitted to Govt. General Hospital, Guntur

Source of data

Patients presented to emergency unit in government general hospital Guntur.

Selection criteria

Inclusion criteria

All patients found to be in a comatose condition at Govt. General Hospital, Guntur (Coma patient appears to be asleep and is at the same time incapable of being aroused by external stimuli or inner need).

Exclusion criteria:

Patients presenting in a comatose condition with any history of trauma

Results

The present study comprised of 50 consecutive patients who presented with non-traumatic coma. 68% of the patients were males, and 32% of the patients were females. The male preponderance in this study may portray the belief that males have riskier or disease-promoting life styles than females and more likely to fall sick and present to the hospital.

Fig.1: different etiologies according to age and gender.

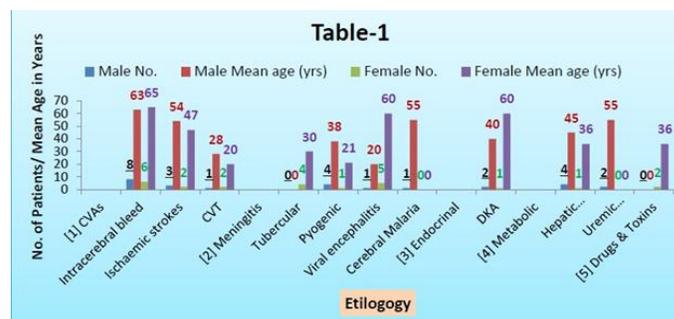


Table 1: Age and sex distribution

Age group	Males	Female	Total
12 – 20	2	4	6
21 – 30	5	4	9
31 – 40	1	3	4
41 – 50	3	3	6
51 – 59	8	2	10
60 and above	7	8	15

Fig. 2: Age and sex distribution

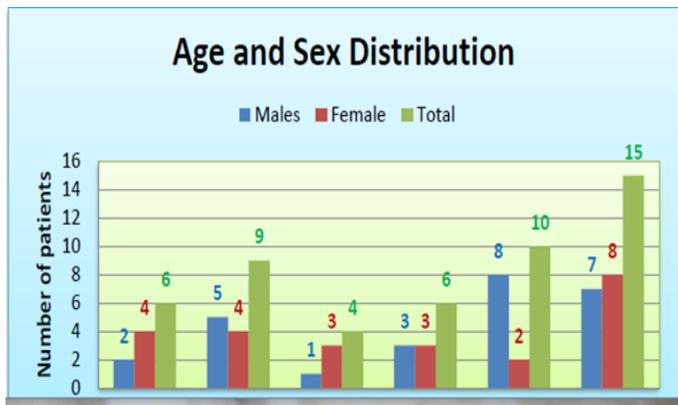


Fig.3: Mortality Rates according to various etiologies



Fig. 4: Mortality Rates according to Brain lesions

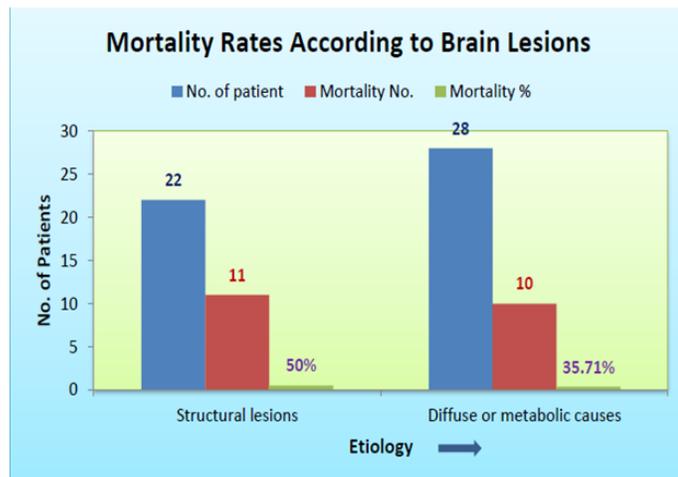


Table 2: Mortality Rates in structural and metabolic causes, with respect to Brain stem reflexes

Etiologies of non-traumatic coma	Total mortality	The absence of 2 or more brain stem reflex	% Mortality
Structural	11	10	90.90%
Metabolic or diffuse	10	6	60%

The table shows that 90.90% of the patients with non-traumatic coma who had the absence of 2 or more the three reflexes (viz, oculocephalic, pupillary and corneal reflexes) succumbed to death.

However, 60% of the patients with metabolic or diffuse cause for coma succumbed to death.

Discussion

- The present study realized that the structural causes non-traumatic coma constituted 59% of the total patients as compared to only
- 35 % of the patients with a metabolic cause of coma.
- 6% of which are due to drugs and toxins.
- The present study patients presented without focal neurological deficit are 56% among them 35.71% died.

Conclusion

- Structural brain diseases leading to coma carried a poorer prognosis than those conditions which caused diffuse affection of the brain.
- Poor Glasgow coma score (< 6) at the onset of coma, carried a bad prognosis.
- Cerebro-vascular accidents were the commonest causes of non- traumatic coma.
- Neuro infective causes and toxin and drug-induced causes of coma have a better prognosis.
- The absence of 2 or more of the brainstem reflexes in a patient with structural brain disease is associated with poorer prognosis

- 68% of our patients were males. 42% of our patients succumbed to death during their in-hospital stay.
- In the present study we realized that amongst the metabolic causes, uraemic coma had the worst prognosis with a mortality of 100% which was in coherence with some Indian studies.
- Of the structural diseases of the brain causing coma, the mortality was highest with ischemic strokes and Haemorrhagic stroke (40% and 50% respectively).
- The mortality rates of patients with GCS of 3, 4, 5 were 71.4%, 19.01%, 9.5% respectively.
- Irrespective of the aetiology of coma, brainstem reflexes provide a reliable indicator of prognosis. The absence of oculocephalic, pupillary, or corneal reflexes, were independent predictors of mortality with rates of 76.92%, 86.48% and 77.08% respectively. Similarly, the presence of these reflexes had lower mortality.
- Thus, it can be concluded that factors that can be taken into account to predict the outcome of non-traumatic coma are the depth of coma, the status of brainstem reflexes and the underlying etiology of coma

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