

**Original article:**

## **Study of etiological factors responsible for non-traumatic coma in geriatric population**

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**Abstract:**

**Introduction:** Coma in the elderly, as defined, is a medical emergency and treatment. In order to improve the prognosis of coma significantly in the elderly, a better understanding of the etiology and a review is necessary complementary precise, fast, and focused. With this view present work was planned to study of etiological factors responsible for non-traumatic coma in geriatric population.

**Methodology:** A total of 50 case were included in my study who presented with non-traumatic coma of more than 6 hours duration. The patients were drawn from general medicine wards, ICU and general out-patient department as well as the Geriatrics OPDs from Dr. D. Y. Patil hospital and research centre. Detailed history of onset of coma with symptomatology related to coma were taken. (proforma attached). All the patients studied by me were assessed clinically their severity will be graded according to Glasgow coma scale and investigated accordingly.

**Results:** In our study the commonest etiology of non-traumatic coma was CVA of which ischemic were(30%), hemorrhagic(14%). In case of metabolic causes uremic( 14%), hemorrhagic( 4%), hypoxic(10%), hepatic(8%). In our study a total of 50 geriatric case were included who presented with non- traumatic coma of more than 6 hours duration.

Conclusion: Common etiologies in males were stroke and common etiologies in female were metabolic causes.

**Keywords:** medical emergency , coma

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**Introduction:**

The patient who appears to be asleep and is at the same time incapable of being aroused by external stimuli or inner need is in a state of coma. There are variations in the degree of coma; in its deepest stages, no reaction of any kind is obtainable: corneal, pupillary, pharyngeal, tendon, and plantar reflexes are in abeyance, and tone in the limb muscles is diminished. In still lighter stages, sometimes referred to by the ambiguous and unhelpful terms semicoma or

obtundation, most of the above reflexes can be elicited, and the plantar reflexes may be either flexor or extensor (Babinski sign). These physical signs vary somewhat depending on the cause of coma.<sup>1,2,3</sup> Coma in the elderly, as defined, is a medical emergency and treatment. In order to improve the prognosis of coma significantly in the elderly, a better understanding of the etiology and a review is necessary complementary precise, fast, and focused.<sup>4</sup> With this view present work was planned to study of

etiological factors responsible for non-traumatic coma in geriatric population.

**Methodology:**

A total of 50 case were included in my study who presented with non-traumatic coma of more than 6 hours duration.

The patients were drawn from general medicine wards, ICU and general out-patient department as well as the Geriatrics OPDs from Dr. D.Y. Patil hospital and research centre. Detailed history of onset of coma with symptomatology related to coma were taken. (proforma attached). All the patients studied by me were assessed clinically their severity will be graded according to Glasgow coma scale and investigated

accordingly .

All these cases were neurologically assessed daily and their progress noted down till the time of death in the hospital or discharge.

**Inclusion criteria:**

- Patients presenting with coma for more than 6 hours,
- Patients above age group of 60 years.

**Exclusion criteria:**

- Patient below age group of 60 years ,
- Any history of trauma

Study was started only after the permission of Institute of Ethical Committee and confidentiality was strictly maintained in the study regarding the identity of the patients and the concerned data.

**Observations and results:**

Table 1: Etiology wise distribution of cases in study group

Etiology	Male (n=32)	Female (n=18)	Total % (n=50)
Ischemic	10	5	15 (30)
Haemorrhagic	6	1	7 (14)
SAH	1	1	2 (4)
Uremic coma	3	4	7 (14)
Heoatic coma	4	0	4 (8)
Hvooxic	1	4	5 (10)
HONKC	1	0	1 (2)
Metabolic acidosis	1	0	1 (2)
Hvooglvemic coma	1	0	1 (2)
Cerebral malaria	0	1	1 (2)
Seotecemia	1	0	1 (2)
Pyogenic	1	1	2 (4)
Tubercular	0	1	1 (2)
Qrganooosohorous	1	0	1 (2)
GBS	1	0	1 (2)

### Discussion:

In our study the commonest etiology of non-traumatic coma was CVA of which ischemic were(30%), hemorrhagic(14%). In case of metabolic causes uremic( 14%), hemorrhagic(14%), hypoxic(10%), hepatic(8%). In our study a total of 50 geriatric case were included who presented with non-traumatic coma of more than 6 hours duration. The patients were drawn from general medicine wards, ICU and general out-patient department as well as the Geriatrics OPDs from Dr. D.Y. Patil hospital and research centre. No geriatric patient with history of trauma was included in our study. In this study a total number of male were more than females and total male patients were 32 (64%) and females were 18( 36%). The number of geriatric patients less than 75years were 42 (84%) which was more than number of geriatric patients above 75years i.e 8(16%) in number. In geriatric age group above 75years total patients were 8 of which there were 7 (87.5%) males and 1(12.5%) female. Here also male predominance is more but it was not significant  $P>0.05$ . In one of the similar studies done in Journal of the American Medical Association for "Identification of Comatose Patients at High Risk for Death or Severe Disability" the study group of patients were 596 with median age of 67 years of which 52% were females. Age has been identified in many studies as a strong

prognostic factor in coma of any etiology . Severe disability and good recovery was more in case of age group less than 75years (young elderly) as compared to age group more than 75years (old elderly), here none of the patients had complete recovery. But it was not significant ( $P>0.05$ ).

In the Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments (SUPPORT), age of 70 years or older was one of five clinical independent variables associated with 2-month mortality in non-traumatic coma. About 45% of the patients were brought to hospital more than 6 h after onset of coma, and this group had statistically significantly higher mortality<sup>5</sup>.

In our study the commonest etiology of non-traumatic coma was CVA of which ischemic were (30%), hemorrhagic (14%). In case of metabolic causes uremic (14%), hemorrhagic (14%), hypoxic (10%), hepatic (10%) .CVA accounted for 44% of total mortality in our study, this was in accordance to a similar study done by Department of Anesthesia and Intensive Care of Gabriel TOURE Teaching Hospital, Mali the cause for coma in 46% of cases was stroke and 28% cases were of metabolic origin<sup>6,7</sup>.

### Conclusion:

Common etiologies in males were stroke and common etiologies in female were metabolic causes.

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