



Clinico-Etiological Spectrum and In Hospital Outcome of Acute Encephalitis Syndrome: A Single Centre Observational Study

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AIMS

This study aims to evaluate the clinical presentations, etiological profiles, and predictors of outcomes in AES patients admitted to a tertiary care center in Eastern India

MATERIALS

STUDY TYPE: Observational Prospective Study

STUDY SETTING: Hospital based study

PLACE OF STUDY: IPD Patients in neurology ,paediatric,medicine and critical care departments of IGIMS Hospital, Patna , Bihar.

PERIOD OF STUDY:2 years

SAMPLE SIZE:78 patients

METHOD

INCLUSION CRITERIA

- 1.Age >5 years
- 2.Case diagnosed as Acute Encephalitis Syndrome(IEC)

EXCLUSION CRITERIA

- 1.Encephalopathy due to toxins,sepsis or metabolic disorders
2. Tuberculous meningitis or meningoencephalitis ,pyogenic meningitis or meningoencephalitis or fungal meningitis or meningoencephalitis
3. Alternative diagnosis such as brain tumors
- 4.HIV positive patients
- 5.Informed consent not given

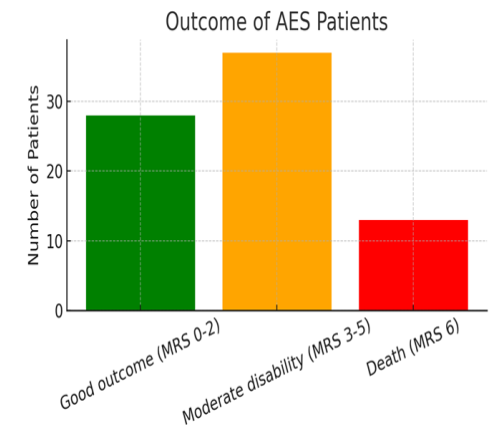
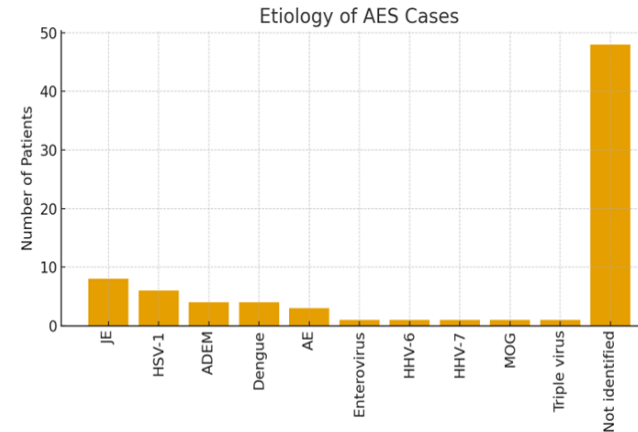
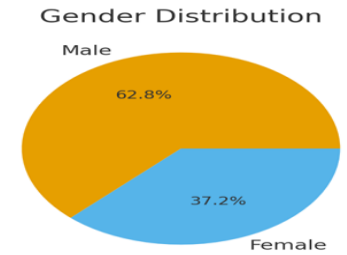
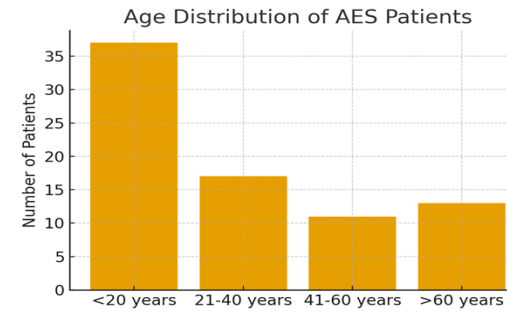
PREDICTORS OF OUTCOME

- 1.GCS at time of admission($GCS < 8$ and $GCS > 8$)
- 2.MRS at particular point of time(at time of discharge /discharge against medical advice)
 - Bad outcome MRS > 2
 - Good outcome MRS < 2
- 3.ICU admissions
- 4.Mechanical ventilation requirement
- 5.Mortality

- Etiology was investigated using multiplex PCR BIOFIRE panel, ELISA for JE and dengue, and autoimmune antibody panels
- IL-6 was measured in CSF by ELISA kit
- Outcome was assessed using the Modified Rankin Scale (MRS)
- Statistical analysis included ANOVA and Chi-square tests

RESULT

- Mean age was 29.78 years
- 62.8% were male
- Fever (83.3%), altered sensorium (89.7%), and seizures (76.9%) were the most common features.
- **JE (10.3%)** and **HSV-1 (7.7%)** were the predominant identified etiologies,
- Though **61.5% remained undiagnosed.**
- **IL-6 in CSF** showed statistically significant correlation with neurological severity
- ICU care was required in 51.3%, and mechanical ventilation in 30.8%
- Mortality was 16.7%.
- Poor outcomes (MRS >2 or death) were significantly associated with GCS <8, pneumonia, and need for mechanical ventilation)



CONCLUSION

- ✓ AES affects all age groups with predominance in younger population
- ✓ High proportion of unidentified etiology highlights need for better diagnostics.
- ✓ Poor outcomes strongly associated with low GCS, need for ICU, ventilation, and pneumonia
- ✓ IL -6 in CSF served as robust marker of neuroinflammation and disease severity
- ✓ Strengthening early diagnosis and intensive care support is essential.