



Acute Viral Encephalitis - A Case Report

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Background

Worldwide, acute encephalitis syndrome (AES) has been a major health problem because of associated high morbidity and mortality. AES is defined as a person of any age at any time of year with the acute onset of fever and a change in mental statuses such as confusion, disorientation, coma, or inability to talk and/or new onset of seizures (except febrile seizure).^[1] The incidence of AES varies in different studies, but the average incidence is between 3.5 and 7.4/100,000 patient-years, the incidence being higher in children.^[2] The etiology of AES can be broadly grouped under infective (bacteria and viruses) or non-infective category, which can vary widely depending on the geographical location and host factors. In most of the cases, the etiologic agent is not identified, and in diagnosed cases, viruses are the major pathogens.^[2] In India, the actual contribution of viruses to AES is not entirely known because of problems associated with laboratory diagnosis and many disorders of central nervous system (CNS) mimicking AES. Japanese encephalitis virus (JEV) vaccine has not been introduced in many regions including the eastern part of India.

Case Report

A 17 year old male patient admitted to our hospital with complaint of With the complaints of fever and headache 14 days, vomiting (5 -7 episodes per day) since 7 days and altered sensorium since 1 day .He was admitted to our hospital where his neurological symptoms worsened during the next 24 hours. Her past medical history was non-significant. On admission, the patient was febrile (axillary temperature of 38°C), normotensive with mild tachycardia. His physical examination showed slow mentation along with generalized slowing of his responses to verbal commands with GCS -13 and also had generalized weakness. Pallor present, BP 120/70, Pulse rate 62/min, Spo2 - 95%.

A lumbar puncture was performed immediately and cerebrospinal fluid (CSF) analysis revealed a TLC – 540 cells/cumm, a red blood cell (RBC) count of 0, a protein level of 169 mg/dL, and a glucose level of 66mg/dL, ADA- 10.9 u/l , DLC- Polymorph -60%, lymphocyte -40%. CSF Anti Japanese Encephalitis virus IgM antibody, Real Time PCR for HSV -1 were negativewhile Serum Anti dengue virus IgM antibody negative However, Serum **Anti chikungunya virus IgM** antibody was **positive**. Blood investigations showed raised TLC with neutrophils (86%),

decreased lymphocytes (8%). LFT showed raised direct bilirubin and SGOT level (59 IU/L), but normal SGPT (31 IU/L) and ALP levels (181 IU/L). Patient had normal Electrolyte levels. On systemic examination, hepatomegaly was observed. On admission a provisional diagnosis of viral encephalitis was made but the investigation parameters was not supportive to it.

Patient was started with Inj acyclovir 500mg IV 8 hourly, Inj Rantac 50 mg IV BD, Inj Perinorm 10 mg IV BD, IV fluids and tab PCM SOS. He improved neurologically and was continued on oral Acyclovir (500mg). He was discharged in a stable condition without any neurological deficit. On follow up patient was asymptomatic and was doing his routine activities comfortably.

Discussion

Acute Viral Encephalitis refers to an acute or sub-acute, usually diffuse inflammation of the brain. The most common cause of sporadic encephalitis is due viral infection with herpes simplex type 1 (HSV1). It is characterized usually by the acute onset of fever, headache, seizures, focal neurologic signs, and impaired consciousness^[3]. Herpes simplex viral encephalitis (HSVE), if not treated, is associated with a high mortality rate of up to 70% within 7-14 days and high morbidity of up to 90% (mostly neurological sequelae) among the survivors therefore making its early and accurate diagnosis of critical importance [3-6]. Prompt and early treatment with Acyclovir has been shown to decrease the mortality to approximately 20%^[4,7].

Conclusions

This is a rare case of acute viral encephalitis with normal CSF findings and responded well to treatment with Acyclovir. Hence, in cases of acute encephalitis syndrome the possibility of Chikungunya should be considered and further precautions/ steps should be considered both at patient level and community level.

References

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