

## **Case report on Japanese Encephalitis: A rare disease in the post-immunized era**

**Key words:** Japanese encephalitis, vaccination, case report

### **Abstract**

**Introduction:** Japanese encephalitis is a disease with high case fatality and high neurological sequelae among the survivors. This disease is commonly seen among children in endemic countries. It is considered that adults develop natural immunity to the infection which is considered to be lifelong. With the introduction of Japanese Encephalitis virus (JEV) immunization there has been a drastic drop in the number of patients, especially as it mainly affects the children. This case report describes a young man who has not undergone Japanese Encephalitis vaccination, developing Japanese encephalitis, leading to neurological complications, which raise the need for the probable adult vaccination, of the people in at risk areas.

This patient presented with high fever spikes, headache, photophobia, and neck pain for 5 days followed by altered level of consciousness for 2 days. On examination his Glasgow Coma Scale (GCS) was 8, with eye opening to pain, unable to speak and able to localize pain. He was febrile, with neck stiffness, dysphasia and rest of the neurological examination was normal. He was haemodynamically stable. His initial cerebrospinal fluid (CSF) revealed, polymorphs  $150/\text{mm}^3$ , lymphocytes  $100/\text{mm}^3$ , sugar  $66.7\text{mg/dL}$  (random blood sugar was not available), protein  $75\text{ mg /dl}$ . Repeat CSF revealed polymorphs  $4/\text{mm}^3$ , lymphocytes  $25/\text{mm}^3$ , protein of  $108\text{ mg/dL}$ , CSF glucose of  $38\text{ mg/dL}$ , random blood sugar of  $89\text{ mg/dL}$ . His CSF for JEV (immunoglobulin M) IgM antibodies was positive. Magnetic resonance imaging (MRI) brain was suggestive of viral encephalitis with high T2 weighted/ fluid attenuated inversion recovery (T2W/FLAIR) signals in lentiform nuclei and caudate nuclei on both sides (R>L), which were oedematous. EEG was suggestive of viral encephalitis. All these evidence added up to the diagnosis of Japanese Encephalitis. Initially he was intubated and managed in the intensive care unit, with IV meropenem and acyclovir, meningitis doses and acyclovir were omitted due to development of acute kidney injury. meropenem was continued for 14 days, as the results of the CSF JEV IgM was not available during this period. After recovery referred for rehabilitation and he had a good neurological outcome. Currently he can attend to his daily activities of living and on treatment for depression.

**Conclusion:** Japanese encephalitis can be a cause for adult patients presenting with features of encephalitis, specially from at risk areas. It is important to consider it, in the differential diagnosis of adult patients with encephalitis. When young people get affected and result in neurological complications, it has a negative