

Proinflammatory Cytokine Levels in Acute Necrotizing Encephalopathy Following Human Herpesvirus 6 with a Good Prognosis

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Abstract : We herein report a 1 year and 2 month old boy who presented with acute necrotizing encephalopathy following a human herpesvirus 6 (HHV-6) infection with a good prognosis. We research the level of interleukin-1 β (IL-1 β), tumor necrosis factor- α (TNF- α) and interleukin-6 (IL-6) in the serial serum and cerebrospinal fluid (CSF) of the patient. The patient presented with fever, then at 3 days after the onset of acute necrotizing encephalopathy, he demonstrated convulsions and a coma. Magnetic resonance images showed symmetric multiple lesions in the bilateral thalami and precentral gyri. CSF showed high level of anti HHV-6 antibody. He was treated by steroid pulse therapy and then recovered without any subsequent handicap. In the present case, the IL-1 β , TNF- α levels in the both of serum and CSF showed normal. However the IL-6 level in the CSF was significantly higher than the serum IL-6 levels. As a result, IL-6 was thus considered to have been produced by the central nervous system, and therefore it was likely related to the pathogenesis of acute necrotizing encephalopathy.

Key words : Acute necrotizing encephalopathy, Cytokine, Human herpes virus-6, IL-1 β , TNF- α , IL-6