Autoimmune Encephalitis Following Herpes Simplex Virus Encephalitis in an Infant

A 6-month-old developmentally normal boy presented to us with fever, recurrent right focal seizures and altered sensorium for two days. He was unconscious with poor respiratory effort requiring mechanical ventilation. Cerebrospinal fluid (CSF) analysis showed high protein (96 mg/dL), normal glucose (60 mg/dL), and lymphocytic pleocytosis (90 lymphocytes and 250 RBC's/HPF). Polymerase Chain Reaction for Herpes Simplex Virus type 1 DNA (HSV-1 DNA PCR) in CSF was positive. Magnetic Resonance Imaging (MRI) of brain showed multiple infarcts in bilateral temporal, frontal regions and left insular cortex. Electro-encephalography (EEG) showed focal slowing over left hemisphere. Seizures were controlled with levetiracetam and fosphenytoin. The infant was treated with parenteral acyclovir for 3 weeks. At discharge, he was well without neurological deficit.

Ten days after discharge, he was re-admitted with involuntary movements, loss of social smile, and not recognizing parents. He was hypotonic with poor visual fixation. Perioral dyskinesia and marked choreoathetotic movements was present. Repeat CSF analysis showed high protein (83 mg/dL), and lymphocytic pleocytosis (96% lymphocytes). Repeat CSF HSV PCR was negative. CSF NMDAR antibody was positive. Infant was initially treated with Intravenous immunoglobulin and Pulse methylprednisolone. As there was no response, he was subsequently treated with 750 mg/m^2 of Rituximab followed by monthly 750 mg/m^2 cyclophosphamide. There was good response; choreoathetoid movements settled and encephalopathy improved.

Herpes Simplex Encephalitis triggers NMDAR antibodies and potentially other brain autoimmunity [1]. These patients can present with relapsing neurologic symptoms or choreoathetosis after Herpes Simplex infection [2]. Prompt diagnosis and early immunotherapy has been shown to improve clinical outcome in these children [3]. In any child who presents with relapsing symptoms or choreoathetosis after HSV encephalitis, the possibility of autoimmune encephalitis should be considered.

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***VENKATESWARI RAMESH AND JANANI SANKAR**
Department of Pediatrics, CHILDS Trust Medical Research Foundation, Kanchi Kamakoti CHILDS Trust Hospital, Chennai, India.
**venka80@gmail.com*

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Evaluation of Asthma Control in Children Using Questionnaires

Somashekar, *et al*. [1] published their study on evaluation of asthma control in children Using Childhood-Asthma Control Test (C-ACT) and Asthma Therapy Assessment Questionnaire (ATAQ) in a recent issue of *Indian Pediatrics* [1]. I seek following clarifications:

1. Spirometry is an important objective measure of airflow limitation, but valid measurements depend on patient's ability to perform full, forceful and prolonged expiratory efforts, which are generally feasible in children aged >6 years. At ages <6 years, its valid measurement is exception rather than rule, and highlights effort-dependence of valid spirometric testing [2].

Peak expiratory flow rate monitoring devices are less sensitive and less reliable as compared to spirometry. If