**Anti-NMDA receptor encephalitis in children – tale of ten years at a tertiary care centre**

**Objective:** Anti-NMDAR encephalitis is a common childhood autoimmune encephalitis and has varied presentations and mimics many infectious/post-infectious etiologies. We have retrospectively studied the clinical profile of patients with confirmed NMDA encephalitis.

**Methods:** Clinical data of patients from January-2012 to February-2022, were collected and analyzed. Diagnosis was based on the presence of anti-NMDA receptor antibodies in cerebrospinal fluid(CSF) and/or serum.

**Results:** Total 22 patients were identified(Males:9; Females:13; median age:10 years (IQR: 5.5-12year)). Most common symptom was seizure-21(95%) children, of whom-12(57%) had refractory seizures, followed by behavioural changes-20(91%), sleep disturbances and altered sleep wake cycle-19(86.4%), emotional lability-18(82%), oromotor dyskinesias-17(77.2%) and choreoathetosis-15(68.2%). Focal motor deficits(hemiparesis and facial palsy) were seen in 6 of them. CSF studies was normal in 12(55%) patients and abnormal in 7(32%)[elevated protein-4, hypoglycorrhachia-1, lymphocytic pleocytosis-3]. MRI Brain was normal in 15 children, 6 had temporal involvement, 1 had changes in the thalamus and substantia nigra.

EEG was done in 19 children (Normal:4(18%); Diffuse cerebral dysfuction:8(42.1%); Focal/Multifocal discharges:9(41%)). None of them had delta-brush pattern on EEG, as well as tumor screen was negative on imaging studies.

All patients received immunotherapy(pulse steroids and intravenous immunoglobulin(IVIG)). 2nd line therapies(Plasma exchange:4 patients; Rituximab-3 patients) was given to those who either did not respond or responded partially to the 1st line agents. Fourteen patients(74%) showed complete response, 5(23%) responded partially, 2(10%) didn’t respond and one(5%) died of sepsis.

**Conclusion:** Anti-NMDAR encephalitis in children presents as fever, seizures and significant movement disorders and encephalopathy. If diagnosed promptly and timely treatment initiated, outcomes are favourable.