

of states from all over India from 1994 to 2018. Seizures were classified according to the International League against Epilepsy Classification (1981). Detailed clinical history and neurological examination was done in all patients. Routine blood tests, computerized tomography of head, and electroencephalography (EEG) were done only in some patients due to nonavailability, limited resources, and poor economic strata of the patients. All patients were given free medicines and were followed-up monthly for assessing the compliance, the response, and side effects of antiepileptic drugs.

Results: Male: female ratio was 2.51. The 36.45% patients were of age group 21 to 30 years and 20.9% were of age group from 11 to 20 years. Most of the patients (86%) were from rural areas. GTCS was the most common seizure type accounting for 67% followed by complex partial seizures (21%). In 68% of the patients no cause could be found for the seizures and they were labeled idiopathic. The commonest causes for symptomatic epilepsy were hypoxic ischemic insult and CNS infections. Majority of the patients were fully controlled on drugs. Fifty percent patients were controlled on monotherapy, 30% were controlled on two drugs, and 18% patients required more than two drugs. The most common drug used was phenytoin followed by phenobarbitone and levetiracetam, sodium valproate, and carbamazepine. Noncompliance of the drug was found to be the most common cause of the recurrent episodes of seizures followed by sleep deprivation and fever. The incidence of mental retardation was 12% and behavioral disorder was 22%. Loss of memory was reported in 48% of the patients, which was relatively very high.

Conclusion: Preventable causes of epilepsy share a significant portion in the etiology of the disease. Maximum patients can be managed at rural center without sophisticated investigations.

A0045: Bilateral Rasmussen's Encephalitis: A Rare and Difficult Entity—Case Report

Swapan Gupta,¹ Neera Chaudhry,¹ Vinod Puri¹

¹*G.B. Pant Institute of Postgraduate Medical Education and Research (GIPMER), Delhi, India*

Introduction: Rasmussen encephalitis is a rare chronic disorder characterized by unilateral inflammation of the cerebral cortex, drug resistant epilepsy, and progressive neurological deterioration. Functional hemispherotomy is the choice of management in drug-resistant cases. The existence of bilateral disease is debated.

Case Report: A 12-year-old girl, born of a nonconsanguineous caesarean section with normal milestones had seizures since 9 years of age. She started with left focal motor (tonic-clonic) seizures with lower limb onset, which evolved to epilepsy partialis continua (EPC) over time, resistant to multiple antiepileptics. Her MRI revealed right temporo-parieto-occipital gliosis and atrophy and EEG showed right hemispherical slowing with superimposed epileptiform discharges. Left hemisphere was completely normal on EEG. She was diagnosed as a case of Rasmussen's encephalitis after ruling out other etiologies and given immunotherapy. After initial failure with steroids, IVIG and pheresis, she

later responded favorably with rituximab but after 6 months, developed right-sided focal motor seizures with lower limb onset which over a short period of time progressed to EPC. EEG revealed slowing in bilateral hemispheres with left hemispherical interictal epileptiform discharges and seizure onset from left-sided (central and midline) channels. MRI revealed T2/FLAIR hyperintense signal in left frontal parasagittal region corresponding to the leg region. She was again given rituximab with modest benefit.

Conclusion: Rasmussen's encephalitis can be rarely bilateral. Management of such patients is difficult since surgical option is not feasible owing to bilaterality.

A0046: Early Onset Seizures in Vacuolating Megalencephalic Leukoencephalopathy with Subcortical Cysts (MLC-Vander Knaap Disease) in a Brahmin Family

Puja Rani,¹ Swapan Gupta,¹ Geeta Anjum Khwaja¹

¹*Department of Neurology, G.B. Pant Institute of Postgraduate Medical Education and Research (GIPMER), Delhi, India*

Background: Epileptic seizures are common and occur early in most gray matter diseases but are rare in white matter disease. MLC, a white matter disease, has been mostly reported from the Agarwal community in India. It usually presents as macrocephaly with developmental delay, cerebellar and pyramidal dysfunction. We report a rare case of MLC from a Brahmin family, with early onset seizure as a rare manifestation.

Case: An 11-year-old boy from Uttarakhand, a Northern state of India, presented with recurrent seizures since age of age. The seizure frequency was variable and semiology was focal motor, evolving to bilateral tonic-clonic seizures. He was born out of nonconsanguineous marriage and belonged to the Brahmin community. Birth history was normal but there was a history of delayed motor and mental milestones. His elder sibling also had recurrent seizures with developmental delay and both had been labeled as cases of cerebral palsy with refractory epilepsy. EEG showed focal as well as generalized spike, polyspike, and sharp wave discharges with eye closure sensitivity. MRI brain was suggestive of diffuse white matter changes with subcortical cysts. Genetic analysis proved the diagnosis of MLC in our case.

Conclusion: MLC which has primarily been reported from the Agarwal community in India can also occur in other communities, and seizures can be an early and initial manifestation of this white matter disorder. This condition is probably under-reported because of its rare occurrence and misdiagnosis.

A0047: Effect of Pentylentetrazole-Induced Seizures on Serum Brain-Derived Neurotrophic Factor (BDNF) Levels and Cognition in Rats

Vibha Patel,¹ Jatinder Katyal,¹ Haroon Rashid,¹

Yogendra K. Gupta¹

¹*Neuropharmacology Laboratory, Department of Pharmacology, All India Institute of Medical Sciences, New Delhi, India*

Objective: Pentylentetrazole (pTZ)-induced seizures affect the serum brain-derived neurotrophic factor (BDNF) levels and also cognition in rats. In this study, effect of acute

pentylentetrazole induced seizures (60 mg/kg, i.p.) and chemical (pentylentetrazole) kindling, that is, multiple injections of subliminal dose of pentylentetrazole (35 mg/kg, i.p.) on serum BDNF levels and cognition in rats was studied.

Methods: Male Wistar rats (200–250 g) were trained for Morris water maze (MWM) test and baseline trials were conducted before subjecting to PTZ-induced seizures. For inducing seizures, rats were given single injection of PTZ (60 mg/kg, i.p.) and multiple injections of PTZ (35 mg/kg, i.p.; chronic kindling) once every alternate day. Seizure score was calculated after each PTZ injection and effect on cognition and serum BDNF level was evaluated. At the end of experiment, retention trials were performed, blood sample were collected for estimation of serum BDNF levels.

Results: Single injection of PTZ-induced seizures lead to significant changes (< 0.01) of BDNF. BDNF levels in kindled rats were found different as compared with normal control (1867.9 ± 549.3 vs. 2226.7 ± 180.9). No significant change in BDNF levels in chronic kindling were observed. Seizures in single injection as well as in multiple injections were significantly associated with cognitive impairment.

Conclusion: Single injection of PTZ (60 mg/kg) induced seizures show changes in BDNF levels and also shows cognitive impairments in rats. In chronic kindling, no effect on the levels of BDNF was observed but showed cognitive impairment in rats.