investigate evidence of focal dipole clustering in patients who happened to have seizures during MEG acquisitions.

Objective:

(1) To compare the source localization results of ictal and inter-ictal MEG studies.
(2) To evaluate the efficacy of MEG results, both Inter-ictal and Ictal with scalp video EEG And MRI findings.

Methods: We analysed prospectively average 2 h inter-ictal MEG data of PWE acquisition with equivalent current dipole (ECD) model with both DANA and CURRY analysis softwares, of the patients with DRE referred to MEG Facility of AIIMS-NBRC Center of Excellence Epilepsy (COE) for MEG assessment. The inter-ictal and ictal MEG was analysed in DANA as well as CURRY by different technologists and epileptologists blinded to each other's results.

Results: 30 out of 310 patients having drug refractory epilepsy who underwent MEG study (Elekta Neuromag® TRIUX™ 306 Channel) had seizures during acquisition. Most seizures were focal (25), however 5 patients had secondarily generalized seizures. Their inter-ictal data analysis showed preliminary abnormal findings in the form of either spikes, sharps or slow waves. Inter-ictal source analysis made with equivalent current dipole model showed focal clustering in 24/30 patients who got convulsions during acquisition. Ictal finding were concordant with the MRI in 85% of those with an abnormal MRI substrate. In those with a substrate negative MRI (9) ictal MEG was concordant with the ictal onset zone on scalp EEG in 56%. In these a repeat MEG done in 2 was again consistent to that of the previous MEG cluster. Interictal and ictal MEG were convergent in their clusters to about 68%.

Findings:

Total no. of patients	310
No of patients who got convulsions	30
No of patients with focal clustering of interictal discharges	24/30
No of patients who got secondary generalized seizures	5
Abnormal MRI	21/30
Ictal finding concordant with MRI findings	18/21 (85%)
Ictal finding concordant with Interictal EEG findings	17/30 (56%)
No. of MEG clustering consistent with repeat MEG	2/2 (100%)
Interictal and Ictal MEG convergence	14/21 (68%)

Conclusion: This ictal analysis study in PWE who are drug refractory and happen to have seizures during acquisitions, have evidence to show that focal clustering region corresponds to the same area as indicated by the other complimentary tests.

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Specific indicators of diffusion weighted magnetic resonance imaging in child cerebral palsy with symptomatic epilepsy

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Purpose of the study: To determine the characteristics of diffusion weighted magnetic resonance imaging indicators in children with symptomatic epilepsy with cerebral palsy.

Materials and methods: The study was based on the results of the study 54 children with symptomatic epilepsy with cerebral palsy aged 1–11 years. All patients underwent standard clinical and neurological examination, with the inclusion of routine MRI. All of 54 studied children underwent routine magnetic resonance imaging with diffusion weighted sequence. Main group consisted of 26 epilepsy patients with cerebral palsy. The control group consisted of 20 children without clinical manifestations of epilepsy and no signs of seizure activity on EEG. FA (fractional anisotropy), values and MD (mean diffusion) were calculated on the same sections for all the resulting images.

The results of the study: In the study these children with symptomatic epilepsy on the background of cerebral palsy we found a significant decrease in the FA values in fronto-temporal areas ($P < 0.01$). In other areas studied FA values were within the normative range To evaluate the results of MRI diffusion is used as indicator of the mean diffusion (MD), an increase of values is associated with a defect in neurogenesis or loss of cells, followed by an increase in the extracellular space. In children with symptomatic epilepsy cerebral palsy was observed the significant increase the MD values in all studied areas ($P < 0.01$).

Conclusion: The obtained results prove that diffusion weighted MRI in children with symptomatic epilepsy and cerebral palsy reveals the structural changes of white matter of brain. A significant increase of diffusion capacity of the brain due to lower fractional anisotropy in the fronto-temporal lobe, indicates the permeability and damage of the myelin sheath in white matter.

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Seizure and insular gliomas

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Background: Insular gliomas are complex and present a great challenge as far as their management is concerned. Most insular gliomas present with seizures and control of seizures is an important goal of treatment. The aim of this paper was to highlight the different seizure semiologies presented by insular glioma and their short term outcome to the treatment.

Methods: 13 patients (Mean age 36 years, M:F = 9:4) with insular gliomas presenting with seizures were analyzed for clinical presentation, radiological features, treatments received and seizure outcome (Engel's grade).