Background and Aims Malformations of cortical development (MCDs) are increasingly recognized as important causes of epilepsy. The aims of this study is to evaluate the presentation and severity of epilepsy in the different types of MCDs in children.

Methods Neuroimaging data of patients with epilepsy and MCDs in MRI were evaluated for a period from 2000–2011. The case records were taken from the medical file.

Results We are reporting 13 cases (9 boys and 3 girls) of MCDs. The mean age at onset of seizure was 20 months (2 months-8 years). Psychomotor retardation were present in 5 patients. Craniofacial dysmorphism was noted in 4 cases and microcephaly in 6 cases. Hypotonia and subsequently limb hypertonia were noted in 5 cases. Partial seizure was seen in 5 patients followed by infantile spasms in 3 cases. EEG demonstrated focal epileptiform discharges in 4 cases, and hypersysthymia in 2 cases. Cortical dysplasia was seen in 4 patients, polymicrogyria in 3 patients, lissencephaly in 4 patients and schizencephaly in one patient. Heterotopias were seen in 3 patients in combination with other malformations. Genetic analysis for Miller-Dicker syndrome showed mutations of the LIS1 gene on chromosome 17 in one case. Only 5 Patients had their seizures controlled by antiepileptic drugs (2 patients with cortical dysplasia and 3 with polymicrogyria).

Conclusion MR imaging allows the detection and classification of MCDs. An adequate classification of these malformations should help to provide to the family an appropriate counseling both in terms of genetics and outcome.