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 hypsarrhythmia 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-Dieker 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.

1504 BDNF AND OXIDATIVE STRESS IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA

Methods We measured serum concentrations of brain derived neurotrophic factor (BDNF), serum thiobarbituric acid reactive substances (TBARS), serum protein carbonylation, serum IL-6 and IL-10 before and after 72 hours intrathecal methotrexate (MTX). This study was performed on 8 children with ALL during the treatment with BFM protocol and in 40 controls.

Results BDNF levels were lower in ALL patients than in controls (p < 0.001). BDNF levels before and after intrathecal MTX had not showed significant alterations. Serum protein carbonylation was lower after complete remission.

Conclusion These findings suggested that there is oxidative stress and decreased levels of serum BDNF in patients with acute lymphoblastic leukemia. The treatment may have a protective role in relation to oxidative stress and possible cognitive deficits.

1505 ZINC DEFICIENCY ANEMIA IN SCHOOL CHILDREN

Background and Aims The objective of this study was to determine the hematologic abnormalities and their potential correlates in school children with zinc deficiency.

Methods 20 parameter hemograms were obtained from the children. Variables that could potentially affect hematological parameters as ferritin, zinc, vitamin B12, and folic acid concentrations were measured in sera of 463 school children. Demographic, anthropometric, biochemical and hematological characteristics of zinc deficient children were compared with those of zinc sufficient children. Associations between potentially related parameters were examined.

Results We showed that zinc deficient and control groups were similar for age and gender (p > 0.05), and zinc deficient children had smaller head circumferences than zinc sufficient children (p < 0.01). We also demonstrated lower hemoglobin (p < 0.001), hematocrit and red blood cell counts in zinc deficient children, despite similar ferritin levels in both groups. Correlation analysis proved significant relationship between zinc and hemoglobin levels (p < 0.001). Linear regression analysis also verified a positive correlation between hemoglobin and head circumference (p < 0.01). Logistic regression demonstrated 12 times more odds of anemia in zinc deficient children (OR: 11.9; 95% CI: 7.0, 20.5).

Conclusions The results implicated that anemia associated with zinc deficiency could not be simply an anemia from iron deficiency but an anemia from deficiency of zinc itself. The results pointed out...