abilities in children born after IUGR. It seems that biological determinants may be the reason for that stronger dependence of morphological variables on other language abilities and for the formation of a compensatory language mechanisms. Children born after IUGR are risk for difficulties in reading and writing according to the structure of their linguistic knowledge: it is important for all professionals involved in follow-up process of this children.

Background and aims Acute necrotizing encephalopathy in childhood (ANE) is a disease characterised by acute encephalopathy and radiological features of bilateral thalamic necrosis. Medium and long term morbidity is not well described. We describe the mortality and morbidity outcomes in our paediatric cohort with this disease.

Methods This is a retrospective ten-year series. Children aged 1 month to 18 years diagnosed with ANE mortality at our institution is 14%. Morbidity and mortality outcomes in our paediatric cohort with this disease.

Results 7 patients were analysed. The median age was 3.7 years. All were previously well with normal development. They had impaired consciousness at presentation with preceding fever and prostration. Typical radiology showed bilateral thalamic involvement with/without areas of haemorrhage and necrosis. Causeful organism included Influenza A H1N1, Human Herpes Virus 6 and Metapneumovirus. All were treated with steroids, immunoglobulin or both.

Outcomes were evaluated at discharge and follow-up and divided into good or poor (including death). One passed away from status epilepticus, respectively), and in chronic stages of disease (2 h and 3 and 8 weeks after induction of lithium-pilocarpine status epilepticus, respectively). we performed real-time quantitative PCR on the hippocampi of immature rats and children with MTLE.

Conclusion TDL are a possible presentation of demyelinating disorders, posing a diagnostic and therapeutic dilemma towards neoplastic lesions. The micro-structural analysis of TDL suggests a severe tissue disruption probably due to the acute inflammatory process and oedema. Our analysis provides metrical tools that together with MR spectroscopy and perfusion may aid to identify accurately TDLs, potentially sparing young patients unnecessary and possibly debilitating brain biopsy.

Background The pathogenesis of large demyelinating lesions is still controversial. Atypical tumefactive demyelinating lesions (TDL) associated with acute inflammation, peri-lesional oedema and gadolinium ring enhancement are infrequently described in patients with juvenile-onset multiple sclerosis (MS).

Objective To describe the clinical, imaging and micro-structural metrics of TDLs and chronic MS lesions in patients with juvenile-onset MS.

Methods Ten patients diagnosed with MS were analysed for the presence of TDLs and chronic non enhancing MS lesions. The MS lesions were defined by a region of interest encircling the lesion centre on 2–3 consecutive slices. DTI images were acquired along 31 independent orientations using a single shot echo-planar imaging sequence.

Results Four patients with 6 TDL, developed acute neurological symptomatology. The two girls presented with acute ataxia and aphasia, and the two boys with severe ataxia. Three patients progressed rapidly to develop seizures, became stuporous and were admitted to the paediatric intensive care unit. Brain MRI demonstrated six TDLs. Analysis of the whole group (10 patients) disclosed 27 chronic non enhancing lesions. Assessment of DTI metrics of TDL as compared to chronic MS lesions disclosed significant differences.

Conclusion TDL are a possible presentation of demyelinating disorders, posing a diagnostic and therapeutic dilemma towards neoplastic lesions. The micro-structural analysis of TDL suggests a severe tissue disruption probably due to the acute inflammatory process and oedema. Our analysis provides metrical tools that together with MR spectroscopy and perfusion may aid to identify accurately TDLs, potentially sparing young patients unnecessary and possibly debilitating brain biopsy.