vitamin B6. The control follow – up at 14 months of age showed normal psychomotor development.

Severe infantile vitamin B12 deficiency is rare and usually due to maternal nutritional deficiency (vegetarian and vegan diet) or malabsorption (gastric resection, pernicious anaemia, Crohn's disease, celiac disease and other).

In this case the origin of mother's normochromic and normocytic anaemia during pregnancy was not diagnosed and as usual, she only was supplemented with folic acid and iron. In conclusion possible mechanisms of the influence of vitamin B12 metabolism on the nervous system based on the literature data are presented. The aim of this case is to draw attention to the importance of adequate supplementation to prevent potentially irreversible neurologic damage.

396 FRONTAL LOBE EPILEPSY WITH GELASTIC SEIZURES

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Gelastic epilepsy are an uncommon seizure type most often symptomatic associated with hypothalamic hamartomas, with a prevalence rate of about 0,5 per 100 000. However, idiopathic and cryptogenic cases with no evidence of cortical structural lesions have also been described. The term gelastic comes from Greek word gelos meaning laughter. Laughter is pathological in nature and can be spontaneous without obvious cause.

We present a 13-year-old girl without structural lesions, manifesting gelastic seizures. The seizures were not associated with feelings of mirth.

Repeated 1,5T MRI revealed no structural abnormality. Interictal EEG showed paroxysms in the right frontal region. Ictal EEG demonstrated diffuse attenuation, followed by fast activities and spike-wave complexes predominantly over the right hemisphere. Unlike the seizure from temporal lobe, semiological investigations revealed that the laughter in our case was not accompanied by a subjective feeling of mirth, and an interictal EEG showed frontal spikes. Results of neurological examination were normal. The Wechsler intelligence scale for children IV(WISC-IV) revealed a mild mental retardation with the intelligence quotient score <70. An interictal FDG-PET CT showed hypometabolism over the right superior frontal lobe and right medial temporal lobe. The seizures were resistant to oxcarbazepine, levetiracetam, valproate and lamotrigine and were suppressed by topiramate monotherapy. Further clinical examinations (high-resolution 3T MRI, ictal and interictal SPECT) will be done.

In conclusion, gelastic seizures are commonly associated with hypothalamic hamartomas but ictal laughing, has been reported with temporal lobe and frontal lobe seizures. Although gelastic seizures have been described as intractable, a few medications including valproic acid, lamotrigine, levetiracetam and steroids were reported to be effective in patients without hypothalamic hamartoma. In our patient topiramate monotherapy proved to be effective in the treatment of gelastic seizures without hypothalamic hamartoma.

397 LONG-TERM MONITORING AND OUTCOME OF HIGH NEURORISK PRETERM INFANTS

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Perinatal brain damage is non-progressive and the processes of maturation and plasticity along with medical procedures can lead to functional recovery. About 3% of newborns are high neurorisk and especially susceptible to brain damage.

The aim of this study is to show the neurodevelopmental outcomes of 77 preterm infants born ≤ 32 nd week of gestation, at the age of nine.

We studied and habilitated 170 high neurorisk children born in Zagreb's largest maternity hospital between 2007 and 2008. At the age of nine, 132 children have remained continuously studied, 77 of whom were preterm infants born ≤ 32 nd week of gestation. All the children were assessed using the Touwen examination. Children with CP were classified according to motor function classifications. Furthermore, all children have undergone EEG, early neonatal brain ultrasound, whereas children with CP had MRI as well.

Infants were classified as 'high risk' according to factors of risk.

At the age of nine years, out of 77, 17 children (22,1%) developed CP. As for associated disabilities, 6 children (35,3%) had an IQ below 70, severe speech impairment had 8/17 (47%), visual impairment 14/17 (82,4%) and 4/17 (23,5%) severe sight loss. 12/17 (70,6%) had refractive error and strabismus. Four children (23,5%) developed epilepsy. Brain ultrasound showed the most severe forms of periventricular leukomalacia for 8 children, another eight children had the most severe forms of peri – intraventricular haemorrhage, while only one child had no abnormality detected. MRI was performed with 13 children, 12 of which suffered from predominant white matter damage, and one of them had additional thalamic haemorrhage. A normal motor outcome was observed in 60/77 children (78%). Of the children with normal motor outcome, one third had refractive error or strabismus, 25/77(32%) suffered from specific language development disorders, while almost a quarter had pathological EEG.

High neurorisk children are particularly susceptible to brain damage in the pre- and perinatal period. Because of that, they need to be detected early, their development needs to be monitored even at school age and they must be included in habilitation programmes. The process of selecting, registering and habilitating children is simple and easily applicable. For that reason, it should be carried out with all preterm infants.

398 LONG-TERM OUTCOME OF EPILEPTIC SEIZURES AND ADAPTIVE BEHAVIOR IN PATIENTS WITH WEST SYNDROME -EXPERIENCES FROM OUR CENTER

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