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Importance of visual evoked potentials in estimation of the maturation in premature children

D. Dzamic, P. Pavicevic, R. Brdar, M. Raicevic
Faculty of Medicine, University of Belgrade, Belgrade, Serbia

Keywords: Visual evoked potentials; Premature children; Maturating in preterm infants; Maturation

Introduction.– Importance of visual evoked potentials (VEP) as diagnostic tool with paediatric patients is to establishing prognosis for visual system recovery for specific paediatric disorders. Aim was to examine the sensitivity of VEP in the evaluation of the optical pathways and recovery of central nervous system maturation in preterm infants with established different degrees of birth asphyxia.

Material and methods.– In University Children’s Hospital we evaluated 16 premature infants that were born at 28–30 weeks of gestation, when they were 6 months old. All infants had perinatal asphyxia. The diagnostic method that was implemented was VEP fles stimulation with detection of cortical responses. The four basic VEP parameters were analyzed: presence or absence of cortical responses, wave form, latency, amplitude.

Results.– All premature infants present some form of dysfunction on VEP evaluation. Severe degree of dysfunctions or absence of cortical responses are significantly frequent in premature infants born at 28–30 gestation week then full term infants in first 6 months were predominantly detected normal function.

Discussion.– Evoked potentials are a valuable diagnostic tool in the detection and assessment of the degree of central neurological dysfunctions and its localization, as well as for monitoring of CNS maturation.

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Deep brain stimulation for secondary dystonia combined with an intensive rehabilitation program in children with cerebral palsy? About a case report

M. Bettencourt, A. Vasconcelos, I. Batalha
Centre de Medicina e Reabilitação de Alcoitão, Cascais, Portugal

Keywords: Cerebral palsy; Deep brain stimulation; Dystonia

Introduction.– Cerebral palsy (CP) is the most common non-genetic cause of secondary dystonia. Pharmacological treatment is often unsatisfactory and Deep Brain Stimulation (DBS) may be an effective treatment option.

Material.– Male, 14 years old with dystonic CP, had a neurostimulator implanted in 18/09/2012 without complications. After 6 months, improvements were seen in the upper limbs and speech, but he was still unable to walk. In April he was admitted in our centre for an intensive inpatient rehabilitation program (physiotherapy, occupational therapy and speech therapy). He also needed botulin toxin in lower limbs and was submitted to surgery on the right foot. Improvements were seen, namely he was able to walk with a walker and ortheses in both feet, with good stability, reduction in involuntary movements, improvement in gait pattern and velocity.

Conclusion.– Our report demonstrates that DBS in secondary dystonia was effective mostly when combined with an intensive rehabilitation program. Improvements were achieved in global functioning, resulting in a better quality of life and participation.

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Retrospective study of antenatal consultations in the reference center of rare diseases of limb defects

F. Guillou
Hôpitaux de Saint-Maurice, Saint-Maurice, France

Keywords: Cerebral palsy; Deep brain stimulation; Dystonia

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Clubfoot in children–Differential diagnostic dilemma

D. Cirovic, I. Petronic, D. Nikolic, T. Knezevic, D. Dzamic, P. Pavicevic, R. Brdar, M. Raicevic

Keywords: Clubfoot; Diagnostics; Children

Introduction.– Clubfoot is often associated with neurological and orthopedic conditions resulting in progressive foot deformity, hypotrophy of lower limbs, sensorimotor dysfunctions and neurological dysfunctions. Aim of our study was to evaluate differential diagnostic dilemma in the diagnosis of clubfoot with and without joined conditions in children.

Material and methods.– We evaluated 37 patients who were diagnosed with persistent unilateral clubfoot and admitted at University Children’s Hospital in Belgrade for further treatment. Initial treatment was done by orthopaedic surgeon by Ponseti method during 5 weeks. Diagnostic tests that were performed included: X-rays and electromyoneurography for lower limbs and foot muscles, and imaging tests: ultrasound and MRI of spine in lumbo-sacral region.

Results.– From 37 patients, after orthopaedic treatment, 23 (65.7%) achieved satisfied correction, and 14 (34.3%) referred for further diagnostics due to the failure of expected correction. From 14 patients that were additionally diagnosed with tethered cord, in 2 (14.3%) extraspinal lipoma was diagnosed, and in 2 (14.3%) congenital peroneal nerve paresis was diagnosed.

Discussion.– Persistent clubfoot, lower limb muscles hypotrophy and paresis of peroneal nerve point out to the necessity of additional diagnostic investigations. Isolated persistent clubfoot often might not be considered just as a single entity.

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