Management of cerebral palsy child with protein-S deficiency


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Objective.– Protein-S deficiency has never been reported associate to a cerebral palsy (CP) in literature. Through this case we expose the difficult rehabilitation of a cerebral palsy child with protein-S deficiency.

Material.– This is a 16-month-old boy, born by forceps with a fetal distress. At the age of 1 month, he developed a thrombosis of the upper right limb. The diagnosis of protein-S deficiency was made (29%). He was treated by anticoagulant and subsequently sent in our clinic for (CP) rehabilitation.

We found in our clinical examination a psychomotor retardation and a spastic tetraparesis. The child underwent a soft rehabilitation and had orthosis. He took initially Baclofen, which was stopped because of convulsions. Botulinum toxin could not be injected because of anticoagulant.

Discussion.– Conclusion. – The cerebral palsy rehabilitation had always be inhibited by the co-existence of other diseases. Particularly of child with CP and protein S deficiency reside in anticoagulant treatment. This requires vigilance with orthosis wearing and cast making. Another problem is about spasticity treatment by unbearable toxin injection because of anticoagulant. A soft rehabilitation and adapted orthosis are the only alternative that we can offer to those children.

Use of ICF for multidisciplinary rehabilitation team and parent rehabilitation goals setting for children with cerebral palsy

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Objective.– The study involved 30 families with children with CP. The evaluation included: the families structured interview (9 questions in all aspects of ICF), -child assessment with Gross Motor Function Classification System (GMFCS), child assessment with Manual Ability Classification System (MACS), Structured interview, GMFCS and MACS data were processed using the “Rehabilitation Problem Solving Form” and it covered 146 ICF categories.

Discussion.– Rehabilitation objectives for using the proposed method “Rehabilitation Problem Solving Form” is quite time-consuming, but allows for a better understanding of the multidisciplinary rehabilitation team proposed rehabilitation goals. Parents usually play a significant role. ICF-CY was used in identifying the point of view of parents in rehabilitation process, giving new opportunities for multiprofessional rehabilitation team in this process.

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Discussion.– Rehabilitation objectives for using the proposed method “Rehabilitation Problem Solving Form” is quite time-consuming, but allows for a better parental motivation to achieve jointly agreed rehabilitation goals.

Evidence for the effectiveness of chest physiotherapy in children with respiratory problems in cerebral palsy (CP)

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Objective.– Chest physiotherapy is often used in children with CP. The main indication is to improve respiratory function and to prevent or treat respiratory infections. The benefits of chest physiotherapy are often based on clinical observations.

Materials and methods.– The study involved 30 children with CP. Three rehabilitation centers in Spain participated in the study. The children were divided into two groups: Group A (n = 15) received chest physiotherapy and Group B (n = 15) received no chest physiotherapy. The children in both groups were matched for age, gender, and severity of CP.

Results.– The children in Group A had a significant improvement in respiratory function compared to the children in Group B. The mean forced expiratory volume in one second (FEV1) increased from 2.2 to 2.5 liters in Group A and decreased from 2.3 to 2.1 liters in Group B (p < 0.05). The number of respiratory infections also decreased in Group A compared to Group B (p < 0.05).

Discussion.– Chest physiotherapy is effective in improving respiratory function and reducing the number of respiratory infections in children with CP.

Conclusion.– Chest physiotherapy should be used in children with CP to improve respiratory function and reduce the number of respiratory infections.
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Clubfoot in children—Differential diagnostic dilemma

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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 pariesis was diagnosed.

Discussion.— Persistent clubfoot, lower limb muscles hypotrophy and pariesis 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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Importance of visual evoked potentials in estimation of the maturation in premature children

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Keywords: Visual evoked potentials; Premature children; 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

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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 botulinum 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 orthoses 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

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