Management of cerebral palsy child with protein-S deficiency

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Keywords: Protein-S deficiency; Cerebral palsy; Spasticity

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.

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Function and neuroimaging in cerebral palsy

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Keywords: Magnetic Resonance Imaging; Cerebral palsy; Prognosis

Objective.– The aim of this study was to describe function (subtypes of CP, accompanying impairments and GMFCS level) in cerebral palsy (CP) in relation to neuroimaging.

Methods.– Descriptions of magnetic resonance imaging (MRI) studies were analyzed and classified into 10 distinct categories.

Results.– The most common abnormalities identified on MRI were brain malformations (22.9%), lesion association (20%) and periventricular white matter injury (PWMI) (18.6%). Severe CP (i.e. GMFCS Level IV-V) and spastic quadriplegic CP were mainly associated with the neuroimaging findings of brain malformation (14/49), PWMI (12/49) and gray matter injury (10/49).

While spastic hemiplegic CP was associated with vascular lesion, dyskinetic CP was associated with gray matter lesion and ataxic CP with non-specific neuro-imaging findings. These neuroimaging patterns were also linked with the occurrence of comorbidities, especially brain malformation and lesion association.

Discussion.– These findings may improve our ability to prognosticate the outcome of children with CP, enabling targeted early direct interventions.

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

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Keywords: Chest physiotherapy; Cerebral palsy; Respiratory problems

Objective.– To determine the effectiveness of chest physiotherapy in children with respiratory problems associated with cerebral palsy (CP) and to establish the most adequate therapy for each group, taking into account the severity of the respiratory limitation, the child’s age and the types of CP.

Methods.– The patients were divided into different groups according to the severity of respiratory limitation and the type of CP.

Results.– The results showed that chest physiotherapy was effective in improving respiratory function in children with cerebral palsy.

Discussion.– Chest physiotherapy is an effective treatment for respiratory problems in children with cerebral palsy. It is recommended for all children with respiratory problems in CP.

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P373-e
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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P375-e
Retrospective study of antenatal consultations in the reference center of rare diseases of limb defects
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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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