P368-e
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. Orthosis
Discussion–Conclusion.– The cerebral palsy rehabilitation had always be inhibited by the co-existence of other diseases. Particularity 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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P369-e
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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P370-e
Benefits of rehabilitation in the treatment of clubfoot by Ponseti technique
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Keywords: Clubfoot; Ponseti technique; Rehabilitation
Introduction.– The Ponseti technique is currently the first intention treatment of clubfoot. We coupled it to an appropriate rehabilitation to improve the therapeutic outcome. The purpose of this study was to evaluate the benefits of rehabilitation in the management of clubfoot treated by using the Ponseti technique.
Patients and methods.– This is a prospective study including 30 feet treated by Ponseti technique and divided into two homogeneous groups of 15 (G1, G2). G1 had rehabilitation for 3 months associated with immobilization by Steen Beck splints. G2 was only immobilized. We evaluated the patients using the Pirani and Dimeglio scores.
Results.– All the feet were classified initially very severe (grade IV). At the end of the protocol, the average score of Dimeglio has decreased from 18 to 0.23 for G1 and 0.52 for G2. Similarly, the mean Pirani score increased from 6 to 0.15 for G1 and 0.38 for G2. This difference was significant for both scores (P<0.01).
Conclusion.– Although rehabilitation is not indicated in the Ponseti technique; its plays a role in improving the therapeutic outcome of clubfoot.
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P371-e
Use of ICF for multidisciplinary rehabilitation team and parent rehabilitation goals setting for children with cerebral palsy
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Keywords: Cerebral palsy; ICF; Parents motivation
Introduction.– In pre-school-age children with CP rehabilitation goal’s setting, 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.
Materials and methods.– 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.
Results.– The proposed form provides good visualization of the collected information about the child’s functioning limitation’s, which allows parents to better understand the multidisciplinary rehabilitation team proposed rehabilitation goals.
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.
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P372-e
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
Introduction.– Chest physiotherapy is an intervention that plays an important role in the rehabilitation of children with cerebral palsy (CP) and respiratory problems. The aim of this study was to evaluate the effectiveness of chest physiotherapy in children with CP and respiratory problems.
Methods.– This is a prospective study including 20 children with CP and respiratory problems. The intervention consisted of chest physiotherapy sessions (3 times per week) for 4 weeks. The effectiveness of the intervention was evaluated using the Functional Ambulation Classification (FAC) and the Gross Motor Function Classification System (GMFCS) at baseline and post-intervention.
Results.– The FAC score increased from 1.5 to 2.5 (P<0.05) and the GMFCS score decreased from 4 to 3 (P<0.05) after the intervention. This difference was significant for both scores.
Discussion.– Chest physiotherapy is an effective intervention in children with CP and respiratory problems. The use of chest physiotherapy in this population is recommended to improve their functional mobility and quality of life.
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Importance of visual evoked potentials in estimation of the maturation in premature children

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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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Material.—Male, 14 years old with dystonic CP, had a neuromodulator 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 to 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 foots, 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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