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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. -- 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 orthoses 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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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.

Materials 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 Dimaglio scores.

Results. -- All the feet were classified initially very severe (grade IV). At the end of the protocol, the average score of Dimaglio 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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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 multidisciplinary 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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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 (CP) in children with CP is used as a support treatment for respiratory problems, but clinical practice has not identified itself as a research field. This study analyzes the results of this treatment in our clinical setting.

Materials and methods. -- A prospective study, in agreement with the ethics committee of the hospital, was carried out with 30 children with CP followed in our service and respiratory problems. The only selection criteria were that the children were between 2 and 12 years old and that they had respiratory problems associated with CP.

Results. -- The results show that the use of CP is effective in improving respiratory function in children with CP. In 22 children, respiratory function improved significantly, with a mean improvement of 24% in forced expiratory volume in one second (FEV1). In the remaining 8 children, respiratory function remained stable.

Discussion. -- These results support the use of CP as a support treatment for respiratory problems in children with CP. Further research is needed to identify the most effective strategies for this treatment.

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