THE KINETIC AND ASSOCIATE REHABILITATION OF THE CHILDREN WITH SPASTIC HEMIPLEGIA IN ICP

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Keywords: spastic infantile hemiplegia, rehabilitation, treatment, Bobath method, Metayer method.

Abstract

The spastic hemiplegia is a motion defect of a part of the body, either on the right or left side. The disability is not always uniform. The kinetic means have an important contribution to the recovery of the children spastic hemiplegia, being included in the treatment plan of the followed subjects, these means have the purpose of strengthen the muscles and the muscle rigidity prevention. To strengthen the overall health of the child with spastic hemiplegia, primarily contributes a complex treatment It activates the body functions, on the whole, boosts the breathing processes and blood circulation, increases appetite, normalizes the sleep. The movements fairly organized contribute to the child general physical development. In the process of the movement abilities forming it is important to develop the in the child the intellectual paralysis as activism, determination, the motivation to overcome his condition, perseverance, determination, the organized character, as well as other worth qualities for every human being.

Introduction

The infantile cerebral paralysis (ICP), are in an ample spectrum of unprogressive and nonhereditary motor disabilities, caused by the lesions at the central nervous system level (CNS), induced in the prenatal, perinatal or early postpartum child [1].The neurological syptomatology is ordinarily prevalent, affecting specially the voluntary, motor activity. A rational evaluation of the cerebral paralysis preponderance at the school age is about 2 to 1000 alive newborns, being especially affected the ones with low weight at the birth. Hemiplegia is characterized by the spastic involvement of the superior and inferior member of the same side (homolateral) [2]. Rarely, there are cases when

the diagnostics can be established before 7 months. In more serious cases the parents or the doctor notice that the child does not use a hand. After the age of 8 month it can be highlighted the inequality of the reflex producing " the preparation for jump" [3]. The superior member with deltoid atrophy, is in adduction, internal rotation. The forearm flexion on the arm, the forearm in rotation. The closed –gathered fist, with thumbs in adduction, covered by one or more flexed fingers. The inferior member is hypertonic, usually in elongation, the hip is in adduction and internal rotation. The knee, in most of the cases is extended, sometimes half-flexed. It can be noticed 1-2 cm. shortenings.

Material-method

As researching material, it were used: the study of general data regarding the specialty literature on that issue, the observation method, the kinetotherapeutical experiment, statistical –mathematical method of the data processing. According to the particular situation and the child evolution level, it was used the kinetotherapy program differentiated from the complexity point of view but the dosage was changed. The kinetotherapy included the Bobath method, Temple Fay and Le Metayer method inclusively the relaxing techniques, the stability stimulating exercises and the walking re-education.

In the kinetotherapy standard program it were used :

- expansion exercises at the beginning of the session,
- exercises for the development of the important movements,
- exercises for members and trunk,
- exercises of equilibrium.

The study organization was effectuated within the kinetotherapeutical halls of the " Republican Rehabilitation Center for Children", Chisinau, with the recovery disciplinary Methodist team: kineto therapist, neuro-pediatrician doctor, physiotherapist, masseur, occupational therapist. The experiment lasted for 4 weeks, in the period of 09 February – 06 march 2015. For the objectives realization of this research, it was organized an experimental group formed by 2 children of both genders, with the age comprised between 2 and 4 years, all of them having the ICP spastic hemiplegia diagnosis.

The subjects were tested 2 times (initially and finally) regarding the level of voluntary motor ability It resulted the motor functional level evaluation on the basis of special files To highlight the achieved progress we used the graphical representation of the motor functional level of the inferior member (I.M.) and the superior member (S.M.). The graphical

representation was made on the basis of gained results at the attainment of the evaluation special files.

Results and discussions

By analyzing the data obtained in the study we can affirm that: the subjects involved have made progress in recovery regardless the age, sex, etc.; the recovery of motor deficit is more significant at the inferior member. Proceeding from the foregoing that early diagnosis and recovery initiated as early significantly improves the possibilities for recovery hemiplegia to the children [4]

As a result of recoveries realized we can affirm that the successes are particularly evident during treatment, but easy to lose along with its ending. Therefore are recommended to continue the methods and at home [5]. The kinetic recovering should be well measured and individualized because the tiredness causes sincinezia and clonus, that lead to the decrease of the ability to coordinate fine movements. At the patients affected as a result of recovery it was increased the degree of limb spasticity, the muscle tone was adjusted, and was improved the posture and increased the motion range [6].

For the rehabilitation of children with ICP there are various means and methods, such as electrotherapy, drug therapy, cryotherapy, occupational therapy, hydrokinetotherapy, orthopedic treatment-apareiaj etc. But the most important and resulting component of the rehabilitation process for children with ICP is the kinetic treatment. Starting from the idea that ICP is an extremely actual problem to the modern society we have proposed an associated complex of rehabilitation activities, adapted to the specific of ICP, that includes:

- **Kineto therapeutic treatment** which is routed depending on clinical manifestations, it is considered as being basic, on the condition to be applied early and seamlessly, helping to fight hypertension or spasms flashing at improving motor function, both in terms of posture as well as the movement, at the vicious posture correction of the child and building habits to relax in commode positions [7]
- **Occupational therapy** lies in the use of several forms of attractive activities for children, sports activities properly selected, designed to compensate the muscle imbalances, improving posture and motion. [8].
- **Therapeutic massage** helps to improve the blood circulation and lymphatic system, stimulation of the relaxed muscles and loosen

of contracted ones thus promoting efficiency in movement and posture, balance of the nervous system.[9]

- **Physiotherapy** intervenes by the increasing of the local temperature having as result the capillary vasodilation, the extensibility of collagen in tendons, ligaments, joint capsules, allowing necessary stretching exercises, combats muscle contractions regardless the origin of the disease by improving the functioning of receptors in the muscles responsible for regulating muscle tone [10].

The proposed set of rehabilitation activities has a high success rate because it includes a number of additional rehabilitation methods and means, it can be recommended for application in medical institutions of all kinds. The necessary time to recover these children is very long, it can be for years and not always fully realized.

The programs of therapeutic-educational collaboration provides the necessity of a medical-social and psycho-pedagogic support to the families that have children with ICP, the development and implementation of early recovery programs individualized of the child, acquisition of motor skills for living and learning activities. So in the physical rehabilitation of children with ICP under home conditions an important role is the partnership between the multidisciplinary team and parents.

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RECUPERAREA KINETICĂ ȘI ASOCIATĂ A COPIILOR CU HEMIPLEGIE SPASTICĂ ÎN PCI

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Cuvinte cheie: hemiplegie spastică infantilă, reabilitare, tratament, metoda Bobath, metoda Metayer.

Rezumat

Hemiplegie spastică este un defect de mișcare a unei părți a corpului , fie pe partea dreapta sau stânga . Dizabilitatea nu este întotdeauna uniformă . Mijloacele kinetice îşi aduc o contribuţie importantă la recuperarea hemiplegiei spastice la copii, ele fiind incluse în planul de tratament al subiecţilor urmăriţi. Aceste mijloace au ca scop întărirea mușchilor și prevenirea rigidității musculare. La fortificarea sănătăţii generale a copilului cu hemiplegie spastică contribuie, în primul rând, un tratament complex. Acestea activizează funcţiile organismului în ansamblu, intensifică procesele respiratorii şi circulaţia sangvină, ameliorează pofta de mâncare, normalizează somnul. Mişcările corect organizate contribuie la dezvoltarea fizică generală a copilului. În procesul formării abilităţilor locomotorii este important să i se dezvolte copilului cu paralizie cerebrală activismul, voinţa, motivaţia de a-şi depăşi condiţia, perseverenţa, determinarea, caracterul organizat, precum şi alte calităţi valoroase pentru orice fiinţă umană.