

ABSTRACT OF THE DOCTORAL THESIS

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THESIS SUBMITTED TO:

NATIONAL UNIVERSITY OF PHYSICAL EDUCATION AND SPORTS

Bucharest, Romania, 2014

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TITLE THESIS:

**OPTIMIZATION OF THE STRATEGIES USED IN THE KINETIC
TREATMENT OF THE CHILD WITH EXTRAPYRAMIDAL SYNDROME**

Keywords: cerebral palsy, child with extrapyramidal syndrome, balance

INTRODUCTION

Strategies to optimize kinetic treatment in children with extrapyramidal syndrome research is based on the establishment of distinct early diagnosis of the extrapyramidal syndrome, its classification and differentiation, in its modern concepts by educating the balance and coordination exercises, in neuromotor schemes.

Spasticity, coordination and cognitive paralysis of the extrapyramidal child brain are distinct from those of pyramidal children, and in terms of prognosis and medication have in common with adult or child without cerebral paralysis pathology, than the location of brain lesions of the basal ganglia area.

Children with extrapyramidal syndrome, cerebral palsy (CP), must be detected early, to be ordinary by proprioceptive and exteroceptive stimulation with motion picture, familiar with the changes position and nonverbal communication through movement. They must abandon the fear of movement and be psychologically motivated to want to become independent.

Purchase of the neuromotor development stages of healthy children should be made with complex balance and coordination exercises, in the neuromotor rehabilitation programs that became concepts.

Because the brain lesions are congenital, extrapyramidal child can not reeducate something that did not acquire further knowledge and more, its obstructed by the archaic reflexes which can't be deleted and abnormal pattern movement.

MOTIVATION OF CHOOSING THE THEME

The extrapyramidal child has no neurological development like a healthy child or like a pyramidal child. Moreover, the athetosis child by not being obstructed by false spasticity develops one way to approach equilibrium, eager to go in feet. For these reasons, we wanted to identify a strategy for optimizing the kinetic treatment in children with extrapyramidal syndrome based on the development and stimulation of balance and coordination, characteristics unidentified by the cognitive of the small patient in his genetic motor baggage.

Another reason was that the Romanian literature we have didn't provide sufficient information for the specialists, the term cerebral palsy is generally true for small Apgar score congenital hypoxia at birth. However, no such clues are not generally available, not all children developing CP in these circumstances.

Training began over 20 years ago and was marked by the books of Dr. Robănescu Neuromotor Rehabilitation and the existation of my son diagnosed with spastic tetraparesis made me deeply motivated to investigate this complex pathology with multiple meanings and aspects of balance and coordination in acquiring independent walking.

PART I

Entitled "Strategies to optimize the kinetic treatment in children with extrapyramidal syndrome", based on 228 national and international bibliographic

sources, It presents theoretical aspects of anatomy and physiology of the central nervous system, especially the basal ganglia lesions which cause extrapyramidal pathology. Based on translations of specialized books I tried a comparative presentation of the adult pathology or child with fatal degenerative and of the child with hypoxic cerebral palsy with positive prognosis of neurological recovery program.

Based on resources, techniques and methods of treatment kinetic tried recovery strategies in this syndrome.

PART II

A study consisted in children over 3 years, considered the threshold nerve maturation, which managed to acquire major motor purchases from a program based on stimulating complex kinetic reactions balance and coordination as age 7 considered the intensive phase of development capacity balance and children that followed the regular pattern based only on the strict stages of development.

PART III

Includes personal research for children with early diagnosis differentiated by categories established in the extrapyramidal syndrome, which benefited from the recovery strategies developed in the kinetic model on older children.

RESEARCH HYPOTHESES

For children over 3 years, the assumptions were:

- Differentiated study of pathology and classification of cerebral palsy can make the physical therapist to make the right decisions into achieve a kinetic treatment optimization strategies in all spheres of action of central nervous system being supported the neuroplasticity and thorough knowledge of the child.

- The use and application supported by strengthening co-classical treatment, stimulate and balance assessment during neuromotor rehabilitation program suitable on neuromotor development stage, helps to overcome deadlock motor control due to neurological damage.

For children aged 0-3 years:

- If the team determines the type syndrome in cerebral palsy by an early diagnosis can be applied on treatment strategies for children with extrapyramidal syndrome by stimulating balance and coordination to achieve a good motor control with little lag as early as possible to a healthy baby.
- By making personalization kinetic treatment based on a concept of complex neurological recovery, reintegration of the child can be improved with normal intellect extrapyramidal child's reintegration in the social environment.

PROCEEDINGS OF THE RESEARCH

The study included 280 children of which 87 with extrapyramidal syndrome as follows: 50 with biological age over 3 years (20 hyperkinetic hypotonic, hypertonic 15 and 15 hypokinetic rigid) and 37 under biological age of 3 years (hypotonic-hyperkinetic syndrome 15, 12 hypokinetic hypertonic and 10 rigid) Regarding the older children, they were returned to the extent that over the years the Center, studied for at least 10 years to clear away the appearance of autonomy.

The recovery software and related tests conducted were between October 2011 and August 2014. Following the initial testing was designed and implemented results of recovery software customized to the needs of each child at the time of the testings. This program applied at the patient's was home thereby taking advantage of the environment with the child is accustomed with.

We made after a certain time a intermediate testing that helped us to highlight that the strengths and weaknesses of the above mentioned software.

Following this assessment, were necessary changes made to acquire motor skills and improve behaviors based on other chronological age and corrected of the children included in the study.

At the end of the period of the final we performed testing to compare the time and check the recovery program.

ANALYSIS AND INTERPRETATION OF THE RESULTS

I sought for older children based on assessment scales consecrate, Bobath, Robănescu, FulgMayer, GFMCS, Ashort indices for assessment of balance positions and reflexes. It should be noted that the study was based on qualitative analysis of movement following the steps of neuromotor development of healthy child. Children with cerebral pathology is a child without psihomotric baggage information whose debut in life is marked by a major gap in terms of motor abnormal movement patterns.

Note that in the case of older children with hyperkinetic syndrome hypotonic (athetosis) and independence movement occurs much faster than in the case of hypertonic-hypokinetic (Parkinson improperly). Children who did not benefit from exercises and complex extero-proprioceptive programs stimulation, failed to gain even own body image and the sores are completely disorganized and twisted but sitting posture or standing can be controlled but not for long and as one rigid, brittle at the slightest movement.

Older children hypertonic received botulinum toxin infiltration and Sockwave applications to combat theme spasticity induced changes in the position, pyramidal and somatic development. No child showed the same trend each with features, which is why we have established based on Ashort Scale, target muscle groups for these procedures. All these procedures were aimed at maintaining biodinamicii coxo-femoral joint, posture and alignment important body.

It is noteworthy the importance of hydrokinetotherapy when parents had the opportunity. Interaction with water at first appears to disrupt more, but after a

short time, maximum 1-2 months, the child becomes lively and uninhibited, coordinating their movements are bound water.

Interactive equipment from console X Box at Armeo and Lokomat, GE-O, device gait and balance analysis, have made a major contribution in self-perception, motivation and autocontrol.

Young children started with simple exercises control especially head-head caudally. The evaluation was done by Bobath scale adapted to Robănescu scale. Psycho-motor gap marked by low experience by limiting the area of knowledge, major statistical evaluation is difficult, these children mostly those athetosis succeed in this three years to sit.

STATISTICAL INTERPRETATION OF THE RESULTS OBTAINED

Statistical analysis in this study tried to outline a favorable prognosis of children with athetosis syndrome even from an early age and positive results for children with hypertonic syndrome but only after a long process of applying neurological recovery strategies outlined in the this study.

CONCLUSIONS

Gaining motor control after hypoxia congenital basal ganglia lesion is a difficult and exhausting for both the child and the parent that takes place over several years. But based on a modern concept of recovery will encompass multiple physical therapist knowledge to stimulate balance and coordination in the pathological CP before following this study substantiate kinetic optimization strategies in the treatment of children with extrapyramidal syndrome, the reintegration of in everyday life.