

BACHELOR THESIS ABSTRACT

Jméno, příjmení: Ivana Klečáková

Vedoucí práce: Ing. Milan Šebek

Title: Physiotherapy for Spinal muscular atrophy in childhood Abstract:

The work has a theoretical and practical part. The target of this work is to compile individual physiotherapeutic program for patients with Spinal Muscular Atrophy in childhood.

The theoretical part deals with a general introduction to the issue of alpha motoneuron and its involvement with hereditary degenerative diseases. Section of the theoretical part is the anatomy and physiology related to this issue. Furthermore, the issues related to Spinal Muscular Atrophy - classification, clinical forms, clinical picture and course, pathogenesis and diagnostics, are elaborated. In the theoretical part I also deal with the current possibilities of rehabilitation and physiotherapy in such patients. This part is crucial for my work and knowledge from it is applied to the management of therapies, which are processed in the practical part of the work. This part deals with physiotherapeutic concepts and methods that are used in the Czech Republic and abroad - exercises on a neurophysiological basis, analytical and conditioning exercises, respiratory physiotherapy and the use of aids for therapy.

The practical part of the work took place in cooperation with the neuromuscular center of the Department of Pediatric Neurology, 2nd Medical Faculty, Charles University and Motol University Hospital. Therapies were performed in two pediatric patients diagnosed with Spinal Muscular Atrophy III. type. In the practical part of the work, the knowledge from the theoretical part of the work is applied to two case studies. Five home therapies were performed on each patient. Therapies are aimed at maintaining and supporting the child's motor functions for the prevention of contractures, spinal deformities, stretching and methods based on neurophysiology (Proprioceptive Neuromuscular Facilitation, Bobath Concept and Dynamic Neuromuscular Stabilization). The evaluation of the effect of the therapeutic intervention was based on kinesiological analysis and functional testing. The Barthel index was used to assess the degree of self-sufficiency.

Key Words:

Spinal muscular atrophy, physiotherapy, childhood, motoneuron disease, rehabilitation