SUMMARY

Title: Timely diagnosis of motor function in children with intrauterine growth retardation and possibilities for its influencing with the aid of physiotherapeutic methods

This dissertation focuses on the examination of children with locomotive coordination disorder that were born with the risk of intrauterine growth retardation (IUGR) in their case history. This work calls attention to notable postural deviations in the 5th week of life of children that affect their motor development in the first year of life and could be a risk indicator for the emergence of postural deviations typical for children's defective posture (VDT).

Aim: to confirm the methodological practice when assessing qualitative indicators of the most serious deviations of locomotive manifestations from physiological development of movement in the 5th week of a child's life with the aid of developmental kinesiology. To confirm the effectivity of physiotherapeutic methods applied at an early age of the neonate. To emphasize the necessity of timely initiation of physiotherapy before the 3rd month of a child's life within the framework of complex care for children with the risk of IUGR in their case history.

Task: to evaluate the development of symptoms of postural deviations in the first four months of a child's life. To assess whether deviations in postural activity have an effect on postural development even at a later age. To draw attention to the necessity of timely initiation of physiotherapy in the complex care of children with the risk of IUGR in their case history.

Subjects and methods: the study was based on the results of the following subjects: *first general subjects* 40 probationaries with the risk of IUGR in their case histories were examined in the years 2001 – 2003. The sample was compiled for the purpose of obtaining orientation in the incidence of various deviations at an early age. *Second subjects* comprised 17 probationaries with the risk of IUGR in their case histories examined during the years 2001
– 2003 and in the year 2009. To ascertain the result of the effect of physiotherapy, we examined the probationaries of this sample according to the commencement of physiotherapy (before and after the 3rd month). Negative results of this examination led us to having the probationaries examined according to the method of the performed physiotherapy. We

compared probationaries that were exercised using Vojta's method only with probationaries exercised using a combination of Vojta's method + handling according to the Bobath concept. *Third subjects* comprised of 12 children born healthy and without risks in their case histories. This was the control sample.

Results: we demonstrated that the 5th week is the stage when postural deviations are demonstrably detected. Significant deviations at this stage are hyperabduction of the hip joint, permanent anteversion in the carriage of the pelvis, and fixed asymmetric carriage of the torso. The results of this work also demonstrate that these deviations detected in the 5th week have an affect on the occurrence of deviations for childhood VDT. We demonstrated that adequately selected physiotherapy effectively influences the lowering of unphysiological locomotor expression. A more significant effect was demonstrated with the physiotherapeutic method combining handling (according to the Bobath concept) and Vojta's method.

Conclusions: in determining and precisely assessing the character of postural deviations at an early age, physiotherapeutic examination of solely postural activity is indispensable and sufficient. In the course of locomotor activity, this examination has the ability to read and evaluate the mutually defined function of all bodily segments.

Key words: intrauterine growth retardation, central coordination dysfunction, developmental kinesiology, postural activity, postural deviation, asymmetry, hyperabduction, anteversion, physiotherapy, Vojta's method, handling, complex care