

Opponent's Critical Review of Master thesis

Title **Comparing Neurophysiologic Methods to Functional Therapy in Treatment of Cerebral Palsy from Newborns to Adolescents**

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Content: 90 text pages, 144 lit. quotations + 3 appendices (16 tables, 2 tests),

Characteristics of the thesis: Literal research review.

Author begins with history of cerebral palsy and finds first vestiges in ancient Egypt, continues till to William Little who named and described this disease as cerebral palsy 150 years ago. After this introduction the author compiles the critical research review of literature dealing with this problem in time between 2010-2012. He deals with epidemiology, aetiology, risk factors, classification of this disease in spastic, ataxic, dyskinetic and hypotonic groups. In diagnostic procedures he refers about motor development of the child and describes testing and scaling of gross and fine motor function, pediatric evaluation and Bayley and Peabody scales used in evaluation of the therapeutic effect.

He brings account of Vojta- and Bobat- treatment as representation of neurophysiologic methods and gives a short survey of functional therapy conceived as facilitating motor development thru influence of the surrounding in a functioning family with some limitations. He compares result effects of all three methods and adds a vast critical discussion of this problem and closes the thesis with correct but a little embarrassed but justifiable discussion.

The vast literal research shows evidently, that cerebral palsy is not one disease, but this term concludes the extensive group of diseases with different motor faults and symptoms coming after the birth. To use one special treatment method for all these diseases is the same problem as to use one antibiotic to treat all infectious diseases. The author writes (page 80) to this problem: *“ you are rather treating the set of different symptoms that are caused by a static lesion of the central nervous system, a lesion which is permanent and does not have a cure.* From this point of view it is very difficult to compare the treatment effect of Vojta method, Bobath method (representing neurophysiologic methods) and functional treatment method used for this complex group of individual physical and mental states esteemed as one disease.

Nevertheless he tries to compare at least generally these methods, because he has a partial personal experience with both methods during practical studies in this faculty and the knowledge from the special literature. He tries to be maximally impartial and comes to the conclusion that every method may have sometimes good effect sometimes poor effect. But it must be also considered, how much contributes the evolution of the motor function itself to the improvement. I judge his opinion as rational and well pondered conclusion.

I have some questions to the author. You are reviewing different clinical symptoms of the disease, and different technical proceedings used in treatment, but how do you include the influence of mental state of the patient, as well as of the physiotherapist on the motor control and on the learning and on the whole motor behavior.? How can influence the motor control personal relations between the physiotherapist and the patient? What is more important for achieving a good therapeutic effect: which specific technique is used, or the way how it is used and individually adapted?

Conclusion

I recommend this thesis to be accepted to the defense before the board of examiners. The paper is well and exactly done in literal quotations is critical and impartial. It is submitted as to be disputed as master thesis. I appreciate this paper because it dares to say the bitter reality about dubious statistical evaluation of treatment effects achieved on inhomogeneous subjects. This paper fulfills all demands for acquisition of the academic degree of Master in physiotherapy, if successfully defended before the commission of examiners. I estimate this thesis as excellent.

Prague, May the seventh, 2012.

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