The importance of the Prechtl method for ultra-early prediction of neurological abnormalities in newborns and infants

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Early detection of cerebral palsy and minimal neurological deficit symptoms in newborns and infants is of crucial importance since it enables timely inclusion of children in neurodevelopmental treatment which contributes to the improvement of motor functional status at a later age, taking into account a biological phenomenon known as "brain plasticity". Conventional methods of neurological assessment of newborns and infants include neurological examination, quantitative assessment of motor functions using scales and tests, and utilization of additional diagnostic neuroimaging procedures as well. All the aforementioned methods are absolutely necessary for wider use in clinical practice as well. They enable fast diagnosis of neurological disorders and fast detection of central nervous system impairments, but they also share a common defect - inability of making adequate prognosis of neurological deficits. Thanks to Prechtl’s Method based on qualitative assessment of spontaneous motor activity, specific neurological patterns that are excellent predictors of a child’s neurological development can be defined even in the prenatal stage, as well as after birth in preterm and term newborns. The aim of the paper is to review literature data on the possibilities and importance of Prechtl’s method in comparison to other conventional methods for ultra-early identification of newborns and infants at risk of the development of permanent neurological deficit – cerebral palsy and/or minimal neurological dysfunction.

Prechtl’s method is the most sensitive and specific clinical diagnostic procedure for the assessment of future neurological outcomes in high-risk newborns and infants.


Key words: newborn, infant, spontaneous motor activity, early diagnosis, cerebral palsy, Prechtl’s method