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Long-term outcomes of posthemorrhagic hydrocephalus in premature infantsIvan Protsenko, Yuri Orlov, Leonid Marushchenko*Institute of Neurosurgery, Kyiv, Ukraine*

Introduction: The neurologic and behavioral development of children with hydrocephalus caused by perinatal brain injury is determined by the significant number of predictors. The purpose of this research was to determine the predictors which define the quality of life of children with posthemorrhagic hydrocephalus and to develop the technique of prognostication of clinical outcomes of the disease.

Material and Methods: The research is based on the results of treatment of 98 premature infants with a posthemorrhagic hydrocephalus who were treated in Institute of Neurosurgery during 2001-2012 years. Shunt operations have been performed in all children. The catamnesis was retraced during 2-14 years. We used the "Quality of life scale" (Y.Orlov, 2001) which allowed us to standardize the results of treatment.

Results: High quality of life was in 29 (29,6%) children, satisfactory – in 48(49,0%), bad – in 21 (21,4%). Bad quality of life was more frequent in extreme premature infants (less than 26 weeks), in children who were born in severe asphyxia with accompanying hypoxic-ischemic brain injury. Meningoencephalitis, motor disorders, extreme ventriculomegaly also were unfavourable prognostic factors. Bad quality of life was more often in a cases when shunt operation were performed after 3^d months of life and the sizes of ventricles had not decreased for a first year after operation, in children who had shunt malfunctions during the first year after operation.

Conclusion: The prognostic factors which define quality of life of premature children with a hydrocephalus have been determined. The technique of prediction of clinical outcomes of posthemorrhagic hydrocephalus has been worked out. The diagnostic coefficients of the factors for the prognostication of long-term outcomes of the disease were detected with using statistical processing of a data with calculation of informational indexes.