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Neuropsychological deficits in children with hydrocephalusVaitsa Giannouli, Nikolaos Syrmos*School of Medicine, Aristotle University of Thessaloniki, Greece*

Introduction: Hydrocephalus is a pediatric neurological disease that occurs when cerebral spinal fluid which surrounds and cushions the brain and spinal cord is unable to drain from the brain. It is diagnosed with the use of an ultrasound, CT or MRI. Studies have shown associations between learning disabilities and hydrocephalus. The objective of this study was to examine if neuropsychological deficits which are on the basis of learning disabilities in children suffering hydrocephalus have a specific pattern for being detected early and recognized easily by both parents and teachers.

Methods: A literature search of the electronic databases PubMed-MEDLINE and EMBASE was performed to identify relevant studies published before December 2013.

Results: Memory, attention, language, motor, executive, visuoperceptual, and visuomotor functions as examined by a wide range of neuropsychological tests seem to be mainly affected by hydrocephalus.

Conclusions: Although further analyses are required to firmly claim our conclusions, our results support that diffuse cognitive and emotional functioning deficits are found in children with hydrocephalus. This systematic review has investigated whether there are specific deficits in children with hydrocephalus, but still no clear pattern is proposed. Neuropsychological impairments and the effects of hydrocephalus of varying severity, etiology-types and at different stages of development have theoretical and clinical value for early detection and intervention in infancy and preschool/school years and therefore need further study.