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Language ability and behavioral self-regulation in children with arachnoid cysts

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Statement of the problem: Due to its congenital origin, it has been postulated that Arachnoid Cystss (AC) may result in atypical cerebral organization. However, because of limitations of cerebral plasticity, AC can cause behavioral problems and deficiencies in various cognitive domains, being language one of the most affected.

Objective: This study seeks to determine behavioral problems and language deficiencies in AC sample and to know if there is any relationship between both domains, assuming the important role of language in behavioral self-regulation.

Methodology: 18 pediatric patients from 7 to 16 years with the presence of an AC (frontal n = 4, temporal n = 13 and occipital n = 1) of different severity level, without any surgical intervention were studied. Wechsler Intelligence Scale for Children, Neuropsychological Battery for Learning Disorders and the Assessment System for Children and Adolescents were applied.

Results: Mild phonological processing deficiencies were found; however, these failures did not affect reading and writing abilities. The use of grammar and expressive language were inadequate. The capacity for organization, planning and behavioral verification was also deficient. Specific scales with poor scores were Personal and Social Resources, Emotional Intelligence and Isolation. Between behavioral and linguistic variables only a significant correlation was found between the use of grammar and the degree of isolation.

Conclusion: Pediatric population with AC show deficits in phonological processing, expressive language and grammar use as well as behavioral problems, mainly low emotional intelligence and isolation. However, no important correlations were found between language variables and behavioral self-regulation.