

Neuropsychological outcomes and health-related quality of life of children operated for nonsyndromic craniosynostosis

Akademisk avhandling

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Avhandlingen baseras på följande delarbeten

- I. Kljajić M, Maltese G, Tarnow P, Sand P, Kölby L. The Cognitive Profile of Children with Nonsyndromic Craniosynostosis. *Plastic and Reconstructive Surgery* 2019; 143:5, 1037-1052.
- II. Kljajić M, Maltese G, Tarnow P, Sand P, Kölby L. Sustained attention and vigilance of children treated for sagittal and metopic craniosynostosis. *Child Neuropsychology* 2020; 26:4, 475-488.
- III. Kljajić M, Maltese G, Tarnow P, Sand P, Kölby L. Children Treated for Nonsyndromic Craniosynostosis Exhibit Average Adaptive Behavior Skills with Only Minor Shortcomings. *Plastic and Reconstructive Surgery* 2021; 147:2, 453-464
- IV. Kljajić M, Maltese G, Tarnow P, Sand P, Kölby L. Health-related quality of life of children treated for nonsyndromic craniosynostosis. *Submitted*.

**SAHLGRENKA AKADEMIN
INSTITUTIONEN FÖR KLINISKA VETENSKAPER**



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Abstract

The primary aim of this thesis was to assess the intelligence quotient, attention function, adaptive behavior skills, and health-related quality of life of children operated for nonsyndromic craniosynostosis. The secondary aim was to evaluate whether surgical methods for treating sagittal synostosis were related to the outcomes. The participants were tested using a range of psychological tests, including The Wechsler Intelligence Scale for Children 4th Edition (WISC-IV), The Conners Continuous Performance Test 3rd Edition (CPT-3), Adaptive Behavior Assessment System 2nd Edition (ABAS-II), and Pediatric Quality of Life Inventory (PedsQL) Generic Module. Seventy-three children operated for nonsyndromic craniosynostosis participated in studies I, III, and IV, and 65 children operated for sagittal or metopic synostosis participated in study II. The results revealed average levels of intelligence quotient, attention skills, adaptive behavior skills, and health-related quality of life, and that the surgical methods used to treat sagittal synostosis were unrelated to lower or higher outcomes. Furthermore, the findings of this thesis suggest that children treated for nonsyndromic craniosynostosis exhibit average neuropsychological function and good health-related quality of life.

Keywords: nonsyndromic craniosynostosis, neuropsychological functioning, adaptive behavior skills, health-related quality of life