

Oral presentation

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Psychosocial adaptation and cognitive functioning in young male adults with myelomeningocele

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Background

Myelomeningocele (MMC) is a multifaceted condition with complex neurological and neuropsychological sequelae mainly due to the MMC itself, hydrocephalus and Arnold-Chiari malformation (ACM). Quality of life and social functioning are known to be impaired in this patient group. Little is known about how clinical history, neurological findings and cognitive functioning influence psychosocial adaptation for young male adults. The aim of this pilot study is to investigate the relationship between these factors and psychosocial functioning. It is hypothesised that cognitive functions, especially executive functions, are of major importance for psychosocial adaptation.

Materials and methods

6 young male adults between 24 and 35 years of age were recruited from TRS National Resource Centre for Rare Disorders. The study group was selected by using the following inclusion criteria: (1) interruptions in the course of education, (2) unemployment, (3) lack of social relations, and (4) social isolation. The study group underwent a systematic clinical history, a neurological investigation and a neuropsychological assessment. The assessment test battery consisted of Wechsler Abbreviated Scale of Intelligence (WASI), the Grooved Pegboard, the Stroop Test from the Delis-Kaplan Executive Functioning System (D-KEFS), letter-number sequencing from Wechsler Adult Intelligence Scale III (WAIS-III), and the Trail making Test.

In addition, the Symptom Checklist 90-R (SCL-90) was used.

Results

All the patients were severely disabled by paresis in the lower limbs, multiple shunt-revisions, ACM, tethered cord, orthopedic surgeries, at least one type of stomy, and reduced sexual function. The results showed in particular deficits in the executive functions, visual-spatial function, and visuo-motor processing. Furthermore, all the patients achieved better results on the verbal subtests than the performance tests. SCL-90 revealed minor psychological problems and symptoms of psychopathology.

Conclusion

The neuropsychological assessment supported the hypothesis that the visual-spatial function and the executive functions were most impaired. This indicates that these functions may be especially important for psychosocial adaptation. We recommend a multimodal examination integrating neuropsychological assessment in the follow up of the MMC patients.