

Oral presentation

Global assessment of function in adolescents with myelomeningocele

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Background

In a previous study we found that the majority of 9-year-old children with myelomeningocele (MMC) had multiple problems, regarding many areas of function in school. The purpose of the present study was to investigate the same group of children with myelomeningocele during adolescence regarding the occurrence and nature of any clinical problem requiring specific help or strategy. We also analyzed risk factors associated with severe problems in function.

Materials and methods

Our study included 18 patients (10 boys and 8 females) with MMC admitted to our centre from 2001 to 2004. The ages varied between 13 and 19 years and the median age was 15 years. Seven children were ambulant and 11 were non-ambulant. All children had hydrocephalus and 14 of these had a shunt inserted. All children had some degree of impaired urinary bladder function. Six children had shown signs of brainstem dysfunction early in life. All adolescents were assessed by structured methods, during a two-week period, by a team constituted of paediatric neurologist, physiotherapist, occupational therapist, neuropsychologist and a teacher.

Results

The group of adolescents had a mean number of six medical problems that required continuous treatment and supervision. A complex medical situation, (seven or more medical problems), were strongly associated with both

early signs of brainstem dysfunction and multiple shunt revisions. The neuropsychological tests showed that cognitive functioning in most of the adolescents were in the lower normal range ($n = 13$) or below the normal range ($n = 3$). All adolescents had some impairment in specific cognitive functioning (slow processing, planning difficulties, decreased spatial ability), requiring specific help and support at school. Ten adolescents had severe cognitive impairments, leading to dependence on others in daily life. Severe cognitive impairments were also seen in ambulant children without shunt.

Conclusion

In the present study we found that all adolescents with myelomeningocele had multiple medical and cognitive problems requiring specific help or strategies in daily life. Adolescents with early signs of brainstem dysfunction were at special risk of developing severe problems. Global assessments of function of all adolescents with myelomeningocele make it possible to develop individual treatment programs.