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Early start to therapy preserves kidney function in spina bifida patients

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Background

Renal scarring and renal failure remain a life-threatening problem in children born with spinal dysraphism; in the literature it is reported that more than 20% of these children die within the first year of life due to renal problems. We show that optimal treatment of the neurogenic bladder from birth onwards can preserve kidney function in most spina bifida patients.

Materials and methods

We reviewed data on all newborns with spinal dysraphism admitted to our hospital between January 1988 and June 2001. We looked at their situation at admission and at follow-up, when treatment was started and the type of treatment (antimuscarinic agents, continuous intermittent catheterisation (CIC), antibiotic prophylaxis), as well as renal function (ultrasound, DMSA scan, serum creatinin, creatinin clearance: Schwartz formula) and bladder function (urodynamic studies). Cases were followed for a maximum of 13 years.

Results

Data from 144 children out of a cohort of 176, could be evaluated by the end of the study: 5 patients had pre-existing renal abnormalities; 69 patients had an overactive sphincter 27 of the 144 patients had reflux and 6 had renal scarring. None of these patients are currently developing end-stage renal disease. 5 of the 6 patients with renal scarring were started on therapy with intermittent catheterisation and antimuscarinic therapy. 63 out of 82 children with spina bifida were dry at school age (6 years).

Conclusion

Early start to therapy helps enormously in safeguarding renal function for children born with spinal dysraphism.