PEDIATRIC UROLOGY

Tubularized incised plate repair: functional outcome after intermediate followup

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Purpose: We describe the functional outcome following tubularized incised plate repair of hypospadias in toilet trained children after an intermediate followup.

Materials and Methods: Children were included in this study only if they were toilet trained and had flow rate data not less than 6 months after primary tubularized incised plate hypospadias repair or 2 months after any secondary procedure to correct complications. Uroflow data (peak flow, voided volume and post-void residuals) were analyzed and plotted on previously determined age-volume dependent nomograms.

Results: Of the 48 boys, 39 required no secondary procedures, while 9 secondary fistula closures were performed in 2, meatotomy in 2 and dilation in 5. After either primary (n = 26) or secondary (n = 7) procedures 33 of the 48 patients (68.7%) had normal peak flow rate and 15 (31.3%) had low peak flow rate. Of the 48 patients 46 had post-void residual urine less than 10% of voided volume.

Conclusions: Most children will void efficiently with no straining and no post-void residual (1/2) to 4 years after tubularized incised plate hypospadias repair. Of our patients 68.7% have normal peak flow rate. Intermediate followup of larger series and followup at puberty are recommended to resolve the debate concerning the long-term functional outcome of tubularized incised plate hypospadias repair.

Editorial Comment

This paper attempts to evaluate the functional outcome of the incised plate hypospadias repair. In my mind, the data are incomplete; however, the authors do find that the majority of patients had flow rates below the mean. Although these data would not yet convince me to give up this excellent repair, it does give pause and make us ever more aware that 6 month to 4 year followup is very insufficient for pediatric urological conditions.

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Imaging studies after a first febrile urinary tract infection in young children

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Background: Guidelines from the American Academy of Pediatrics recommend obtaining a voiding cystourethrogram and a renal ultrasonogram for young children after a first urinary tract infection; renal scanning with technetium-99m-labeled dimercaptosuccinic acid has also been endorsed by other authorities. We investigated whether imaging studies altered management or improved outcomes in young children with a first febrile urinary tract infection.

Methods: In a prospective trial involving 309 children (1 to 24 months old), an ultrasonogram and an initial renal scan were obtained within 72 hours after diagnosis, contrast voiding cystourethrography was performed one month later, and renal scanning was repeated six months later.

Results: The ultrasonographic results were normal in 88 percent of the children (272 of 309); the identified abnormalities did not modify management. Acute pyelonephritis was diagnosed in 61 percent of the children (190 of 309). Thirty-nine percent of the children who underwent cystourethrography (117 of 302) had vesicoureteral reflux; 96 percent of these children (112 of 117) had grade I, II, or III vesicoureteral reflux. Repeated scans were obtained for 89 percent of the children (275 of 309); renal scarring was noted in 9.5 percent of these children (26 of 275).

Conclusions: An ultrasonogram performed at the time of acute illness is of limited value. A voiding cystourethrogram for the identification of reflux is useful only if antimicrobial prophylaxis is effective in reducing reinfections and renal scarring. Renal scans obtained at presentation identify children with acute pyelonephritis, and scans obtained six months later identify those with renal scarring. The routine performance of urinalysis, urine culture, or both during subsequent febrile illnesses in all children with a previous febrile urinary tract infection will probably obviate the need to obtain either early or late scans.

Editorial Comment

This is a fascinating study that tests our acceptance of routine radiographic testing in children with febrile urinary tract infections. By performing a renal ultrasound, VCUG and DMSA scan in all febrile infants with a UTI and then looking back at the results, the authors concluded that the ultrasound played no role in management. Furthermore, the DMSA scan did not alter management either. Although the authors still accept a role for the VCUG, they challenge the reader to prove the assumption that prophylactic antibiotics will reduce the incidence of reinfection and renal scarring. Although further studies of this population group are needed, this study is important in that it is the first to provide evidence evaluating the effect of currently routine interventions in this population.

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