PEDIATRIC UROLOGY

Outcome analysis of severe chordee correction using tunica vaginalis as a flap in boys with proximal hypospadias

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Purpose: There is ongoing controversy regarding optimal treatment for severe ventral curvature. It has been suggested that ventral corporeal lengthening may be associated with recurrent curvature and erectile dysfunction. To further assess these issues we reviewed our experience with ventral penile lengthening for correcting the severe ventral curvature associated with proximal hypospadias.
Materials and Methods: We reviewed the records of 38 boys with severe hypospadias and congenital ventral curvature greater than 45 degrees who were treated at our institution from 1995 to 2004 with placement of a flap or graft in the corporeal bodies to straighten the phallus. Of the patients 21 had perineal and 17 had penoscrotal hypospadias, including 22 with associated penoscrotal transposition and/or bifid scrotum and 6 with ambiguous genitalia. Testosterone stimulation before surgery was given in 11 children at surgeon discretion.
Results: Median age at surgery was 15 months. The urethral plate was divided in 94.7% of patients. A tunica vaginalis flap was used alone in 23 cases and associated with dura, pericardium or small intestinal submucosa in 8, 2 and 1, respectively. The remaining 4 patients underwent ventral grafting alone, including lyophilized dura in 1, pericardium in 1 and dermis in 1. Urethral reconstruction was achieved by the transverse island flap technique or 1 of its modifications in 34 children. Four boys underwent a 2-stage procedure. Followup available on 35 of 38 patients was 1 to 11 years (median 5.3). Recurrent ventral curvature in 5 of 35 patients was mild in 1 and clinically significant, requiring re-intervention, in 4. Four of 9 patients (44.4%) who underwent corporeal grafting with lyophilized dura had recurrent ventral curvature vs. 1 of 23 (4.3%) who had a tunica vaginalis

flap (chi-square 5.14, p = 0.02). At last followup straight erections were documented by patients and/or parents in 30 of 35 children (85.7%). Conclusions: The short-term outcome of ventral penile lengthening using tunica vaginalis flap alone for correcting severe chordee is favorable with a 95% success rate. Dural grafts were associated with a higher risk of recurrent ventral curvature compared to tunica vaginalis flaps. Although most of our patients were not yet adults, when chordee and erectile dysfunction may become apparent, we believe that tunica vaginalis flap repair is a good option for correcting severe ventral curvature.

Editorial Comment

Important points made in the manuscript include that if grafting is the surgeon's choice, that the grafts should be 20-30% larger than the defect. The tunica vaginalis flap was easy to harvest and these authors had excellent success. Being a flap rather than a graft, it can be cut to the appropriate size. The blood supply has been shown to be reliable and the complications noted doing a one-stage repair are in line with what one would expect from one-stage repairs without the severe curvature correction. I find most mild chordee can be corrected dorsally but I agree with these authors that the tunica vaginalis flap is their procedure of choice to correct severe chordee on the ventral aspect of the penis.

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Long-term tolerability of tolterodine extended release in children 5-11 years of age: results from a 12-month, open-label study

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Objective: To evaluate the long-term tolerability of tolterodine extended release (ER) in children (aged 5-11 yr) with urgency urinary incontinence (UUI).
Methods: This was a multicenter, open-label extension of a 12-wk, double-blind, placebo-controlled study of tolterodine ER. Patients had UUI suggestive of detrusor overactivity (>/= 1 diurnal incontinence episode per 24h for >/= 5 of 7 d) and >/= 6 voids per 24h at baseline and had completed the 12-wk double-blind study. Patients received tolterodine ER (2mg once daily) for 12 mo. The primary end points were the incidence and severity of adverse events (AEs) and the incidence and reasons for withdrawals. Visits were scheduled at 3, 6, 9, and 12 mo, and investigators were instructed to report all AEs. At 6 and 12 mo, vital signs were recorded and a physical examination was performed.
Results: A total of 318 patients were enrolled (double-blind tolterodine ER, n = 221; placebo, n = 97). The majority of patients were white (90%), mean +/- SD age was 7.6 +/- 1.5 yr, and 54% were boys. Forty-nine percent of patients reported >/= 1 AE during the study, similar to that observed in the preceding 12-wk study (42%). The most frequent AEs were urinary tract infection (7%), nasopharyngitis (5%), headache (5%), and abdominal pain (4%); 111 (35%) patients withdrew. The most common reasons for withdrawal were lack of efficacy (12%), symptom improvement (8%), and withdrawn consent (6%). Ten patients (3%) withdrew because of AEs.
Conclusion: Long-term treatment with tolterodine ER was well tolerated in children with UUI.

Editorial Comment

This is the first large-scale prospective study for long-term safety and tolerability of tolterodine extended release, showing mostly mild side effects and 65% of the patients completing the entire 12 month treatment period. Few long-term drug studies are performed in children, which makes this study more significant. My regret for the study is that they did not include an efficacy arm so that a practitioner could have all the information necessary to make wise treatment choices for their patients that may need long-term care.

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