

in group 2 were operated by our novel technique, simply comprise of preparing paraurethral longitudinal flap as Mathieu procedure together with modifications, benefited from Snodgrass urethroplasty, such as a complete longitudinal incision on the urethral plate as well as the coverage of the neourethra with inner preputial flap. All of the repairs have been done by one surgeon and on an 8 Fr urethral catheter which was removed 7-10 days post-operatively. Operative data as well as the outcome of both procedures were analyzed prospectively after 1 year of follow-up.

Results: Both groups were age matched: (Group 1: 6.83 ± 4.70 , Group 2: 7.08 ± 2.11 years), without any significant differences regarding mean operative time. (95 min vs. 103 min in group 1 and 2 respectively). There were 2 (16.7%) cases of post urethroplasty urethrocutaneous fistula with associated meatal stenosis in group 1. One of them was managed conservatively by meatal dilation while the other required undergoing operative fistulectomy 8 month later. There were no urethrocutaneous fistula in group 2 patients and all of them benefited from slit-like meatus with normal caliber.

Conclusion: Combining the Mathieu procedure with TIP-principle could be considered as a promising novel and simple technique in order to achieve a normal shape meatus and to reduce the rate of meatal stenosis and its associated urethrocutaneous fistula; the major concern about Snodgrass procedure.

MP-02.07

Dorsal dartos flap in Snodgrass hypospadias repair: how to use it

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Purpose: To introduce new technique for covering neourethra with dorsal dartos subcutaneous tissue in Snodgrass hypospadias repair.

Material & Methods: The study included twenty sex patients with primary hypospadias, aged 2 to 22 years (average 7.86), who were operated from June 2002 to August 2006. Of the patients, twenty one patients had distal, three had midshaft and two had penoscrotal hypospadias. The standard technique of tubularized incised plate (TIP) with double layers covering of neourethra by subcutaneous tissues was used in the reconstruction of all cases. A longitudinal dorsal dartos subcutaneous

flap was harvested and dissected from the middle then both layers of flap were symmetrically transposed to the ventral side of the penis. Each layer was sutured to the glans wings and to the corpora cavernosa thus the neourethra became completely covered with double layers of well-vascularized tissue. The mean follow-up period was 4.5 months (range 3-12 months).

Results: Successful results of normally looking penis without fistula were achieved in all patients. Only one patient had meatal stenosis (3.84%) at early post-operative period which was corrected by urethral dilatation of external meatus at interval up to two months postoperatively.

Conclusion: Our technique represents a reasonable option for utilizing dorsal dartos subcutaneous tissue in TIP urethroplasty. The neourethra is symmetrically covered with double layer of well vascularized tissue and the penis is kept without rotation. Redundancy of the flap and its excellent vascularization depend on harvesting technique. Further follow up and larger number of patients are needed before a final conclusion could be made.

MP-02.08

Evaluation of the long-term function outcome with uroflowmetry: the meatal-based flip-flap repair for distal hypospadias

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Introduction: The meatal-based flip-flap urethroplasty (Mathieu repair) was taken the place of distal hypospadias repair by the tabularized incised plate urethroplasty (Snodgrass repair) because of the inferiority of postoperative cosmetic appearance. However, recently voiding function has become considered as important postoperative evaluation. Although uroflowmetry is mainly used for short-term functional evaluation after hypospadias repair, long-term investigation has never reported. We analyzed the Mathieu repair following more than 5 years with contact uroflowmetry.

Methods: Eighteen patients with distal hypospadias were annually evaluated with uroflowmetry more than 5 years since they underwent Mathieu repair between 1993 and 1997. The Mathieu procedure was used as primary repair in 12 patients

and as secondary repair in 6. The maximum flow rate and voided urine volume were plotted to nomogram of normal boys.

Results: All data were plotted within normal range in 12 patients (67%) during the period. Three patients revealed significant improvement in uroflowmetry after they underwent mild dilation for the neourethra because the data were below normal range at first. The remaining 3 patients always or sometimes showed lower than normal range without symptoms.

Conclusion: Postoperative long-term follow-up with uroflowmetry proved that most hypospadiac patients who underwent the Mathieu repair maintained excellent voiding function.

MP-02.09

A clinical spectrum of posterior urethral valves with long-term follow-up

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Introduction & Objectives: Posterior urethral valves (PUV) have a broad clinical spectrum and are still controversial subjects in their managements. We evaluated long-term outcomes after transurethral incision (TUI) of the valves in PUV classified according to secondary anatomical changes and functional damage.

Methods: The medical charts of 38 boys with PUV (age at presentation: 1 day-9 years old; median 7 months old), who undertook TUI and had been followed up for >1 year, were reviewed. They were classified to 3 groups according to Pieretti (1993). Eleven patients were classified to the mild group which did not have any anatomical urinary deformity except PUV, 21 to the moderate group which associated a ureteral reflux (VUR) or bladder deformity, and 6 to the severe group which resulted in upper urinary tract and renal damages. Median follow-up was 9.5 years (1.2-22.3 years).

Results: Thirty-one boys presented with urinary tract infection, 3 were detected by prenatal ultrasound, and the remaining presented with nocturnal enuresis in 2 and hydronephrosis, hematuria or abdominal pain in 1, respectively. In the mild group, all obtained symptom free and no further treatment required. VUR in the moderate group was diagnosed in 19 patients, 30 ureters, which resolved after TUI within 5 years in 20 ureters (67%) and graded down in 5 ureters (17%). Anti-