

## **A novel “fez procedure” for non-compliant bladders and obstructed megaureters: Augmentation ileocystoplasty and ureteral reimplantation into ileal loop**

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### **Introduction & Objectives**

We report the experience with our novel “fez procedure” to manage children with refractory neurogenic or non-neurogenic poorly-compliant bladders, and concomitant obstructed megaureters; to demonstrate the efficacy and safety of this procedure.

### **Material & Methods**

Retrospective review of 21 children, 15 boys and 6 girls, who underwent fez procedure at our institution between March 2004-June 2011. Before performing fez surgery, the renal functions were initially improved and stabilized by previously established cutaneous ureterostomies (17 children), or by temporary nephrostomies (4 children). Fez procedure is a modification of Studer’s technique; entailing augmentation ileocystoplasty, and using an afferent tubularized ileal loop for direct ureteroileal anastomosis. The augmented bladder and ileal loop were fashioned as “fez” with its tassel. Outcomes measured were changes in cystometric capacity, bladder compliance, GFR, and serum creatinine; evidence of ureteral obstruction, VUR, incontinence, UTIs, and complications. Two-tailed  $P < 0.05$  was significant.

### **Results**

Mean  $\pm$  SD age was  $9.4 \pm 1.3$  (range, 6-12) yr at the time of fez surgery. Mean followup was  $52.5 \pm 12.8$  mo. Means of changes of cystometric capacity ( $273.2 \pm 60.9$  ml) and bladder compliance ( $15.6 \pm 4.2$  ml/cm H<sub>2</sub>O) were significant ( $p < 0.0001$ , each). The initially improved renal functions were maintained with none-significant changes of GFR ( $p = 0.22$ ) and serum creatinine ( $p = 0.18$ ) after fez surgery. None experienced ureteral re-stenosis, VUR, incontinence, febrile UTIs nor significant complications.

### **Conclusions**

Fez procedure proved to be versatile and successful surgical option for this particular group of patients; improving bladder capacity/compliance, preserving renal functions, resolving ureteral obstruction, incontinence and symptomatic UTIs; and having acceptable morbidity.