in renal epithelial cell injury, which in turn is a most important factor in calculus formation. We investigated the influence of kidney damage secondary to shock waves on Ca oxalate crystal retention in the kidney.
Materials and Methods: A total of 32 rats were randomly divided into 4 groups, including group 1--controls, group 2--sham treated rats given 25 ml 0.75% ethylene glycol per day for 14 days, group 3--rats given 15 kV 1 Hz shock waves 500 times to the left kidney, followed by 25 ml 0.75% ethylene glycol daily for 14 days, and group 4--rats with the same treatment as group 3 except the number of impacts was increased to 1,000. The 2 kidneys were removed at the end of the experiment. Ca oxalate crystals were observed by surgical microscopy in kidney sections stained with hematoxylin and eosin. Crystal morphology was determined using polarizing microscopy. Acidified kidney tissue homogenate was examined for Ca and oxalate content by colorimetry (Sigma).
Results: Kidney sections showed that kidneys that did not receive shock waves had fewer crystals than kidneys with shock waves, which had crystals in major areas. In the left kidney in groups 2 to 4 the mean +/- SD quantity of Ca was 16.88 +/- 6.41, 28.58 +/- 7.54 and 40.81 +/- 15.29 micromol/gm wet kidney and the mean quantity of oxalate was 8.44 +/- 6.80, 20.52 +/- 7.70, 31.76 +/- 14.14 micromol/gm wet kidney, respectively. Ca oxalate density increased with the number of shock wave impacts.
Conclusions: Kidney damage caused by shock wave treatment can increase Ca oxalate crystal retention in the kidneys of rats in this stone model.

Editorial Comment

The authors elegantly demonstrated in a rat model that shock wave therapy results in proximal tubular injury in a dose dependent manner. Also, this was associated with a markedly increased deposition of CaOx stones in kidney tissue.

The study is provocative, since we know that extracorporeal shock wave lithotripsy is associated with a high rate of stone recurrence. The main shortcoming of the study is the use of a rat model, which have a kidney very different from humans. Probably, further studies in pigs, which have kidneys very similar to human kidney, would better clarify this issue.

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RECONSTRUCTIVE UROLOGY

Urethral lengthening in metoidioplasty (female-to-male sex reassignment surgery) by combined buccal mucosa graft and labia minora flap

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Objectives: To develop a technique for urethral reconstruction using a combined labia minora flap and buccal mucosa graft. Urethral lengthening is the most difficult part in female transsexuals and poses many challenges.
Methods: From April 2005 to February 2008, 38 patients (aged 19-53 years) underwent single-stage metoidioplasty. The technique starts with clitoral lengthening and straightening by division of both clitoral ligaments

dorsally and the short urethral plate ventrally. The buccal mucosa graft is quilted to the ventral side of the corpora cavernosa between the native orifice and the tip of the glans. The labia minora flap is dissected from its inner surface to form the ventral aspect of the neourethra. All suture lines are covered by the well-vascularized subcutaneous tissue originating from the labia minora. The labia majora are joined in the midline and 2 silicone testicular implants are inserted to create the scrotum. The neophallus is covered with the remaining clitoral and labial skin.
Results: The median follow-up was 22 months (range 11-42). The median neophallic length was 5.6 cm (range 4-9.2). The total length of the neourethra was 9.4-14.2 cm (median 10.8). Voiding while standing was reported by all 38 patients, and temporary dribbling and spraying were noted by 12. Two fistulas and one urethral erosion resulted from the testicular implant and required secondary revision.
Conclusions: A combined buccal mucosa graft and labia minora flap present a good choice for urethral reconstruction in female-to-male transsexuals, with minimal postoperative complications.

Editorial Comment

Belgrade has established itself as one of the premier centers for urologic reconstruction. Specifically, they have pushed advances in female-to-male sex reassignment surgery. In this article, accompanied by several instructive photographs, they describe the technique and results of the metoidoplasty with urethral lengthening using buccal mucosa. This technique represents a departure from the radial forearm free flap technique. Instead, they rely on pre-operative clitoral lengthening with a combination of androgens and a vacuum pump. The enlarged clitoris is freed from its ligamentous attachments and the urethral plate is divided to achieve adequate length. This leaves a urethral defect of several centimeters, which is then bridged with a dorsal buccal graft, and a ventral onlay of labia minor flap.

From a reconstructive standpoint, this is really a sensible and beautiful operation. It employs techniques familiar to the urethral reconstructionist. Many of the men are able to obtain erections postoperatively, although none was sufficient for penetration. All were able to void in the standing position. Hopefully this variation of the metoidoplasty can offer a relief from the complications of urethral construction associated with previous female-to-male transsexual procedures. We look forward to hearing long-term results.

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Urodynamic changes and initial results of the AdVance male sling

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Objectives: To present the urodynamic changes and early results associated with the AdVance male sling. The AdVance male sling is a treatment option for postprostatectomy incontinence (PPI), with the goal of eliminating urinary incontinence without affecting voiding parameters. A concern of any procedure in treating men with PPI is whether the treatment induces obstruction and causes retention.
Methods: Data were prospectively collected from 13 patients undergoing AdVance male sling placement for PPI. Urodynamic testing was performed at baseline and repeated at 6 months postoperatively. A 24-hour pad