

improved stone-free rate (94.6% vs 92.4% overall). Patients with stones <10mm had a greater stone-free rate than those with larger stones ($P=0.02$). Complications (e.g. minor ureteral perforation and stone migration) were experienced by 1.4% of patients when only stones <10mm were considered, and in 4.2% overall.

The authors suggest that emergency ureteroscopy is a safe and effective treatment for ureteral stones (especially those distally located) that provides patients with immediate relief from pain and stone fragmentation.

Original article Osorio L *et al.* (2007) Emergency ureteroscopic management of ureteral stones: why not? *Urology* **69**: 27–31

Some patients with low detrusor contractility benefit from BTX-A injections

Injections of botulinum A toxin (BTX-A) into the urethral sphincter can reduce urethral resistance and allow spontaneous voiding in patients with sphincter hyperactivity. Kuo investigated the effect of BTX-A injections into the external urethral sphincter of patients with idiopathic low detrusor contractility, and assessed whether baseline urodynamic data correlated with patient outcomes.

A total of 27 patients (5 male, 22 female) with bladder and urethral dysfunction confirmed by videourodynamic assessment received one BTX-A treatment (injection of either 50 U in 4 ml saline or 100 U in 8 ml saline). Recovery of detrusor contractility (defined as increased detrusor pressure combined with reduced postvoid residual urine volume and increased maximum flow rate) was achieved in 13 patients. Recovery was not achieved in 14 patients, but symptoms improved. Treatment failure, defined as no improvement in patient-reported quality-of-life, was seen in three patients. Patients with recovery of detrusor contractility experienced a surprisingly long duration of therapeutic effect, compared with those without recovery (mean 14 ± 7.5 months vs 4.6 ± 2.5 months, $P < 0.001$).

Patients who had normal bladder sensation during the filling phase, low detrusor contractility, hyperactivity or poor relaxation of the urethral sphincter at baseline were more likely to achieve recovery of detrusor contractility than those with poor bladder sensation, true detrusor underactivity, or detrusor overactivity with inadequate contractility.

The author concludes that BTX-A injections can have considerable short-term therapeutic benefits in patients with favorable baseline urodynamic characteristics.

Original article Kuo HC (2007) Recovery of detrusor function after urethral botulinum A toxin injection in patients with idiopathic low detrusor contractility and voiding dysfunction. *Urology* **69**: 57–62

Apoptosis biomarkers could aid prediction of outcome after surgery for bladder cancer

Karam *et al.* investigated whether expression of four apoptosis-related biomarkers (Bcl-2, p53, caspase 3 and survivin), alone or in combination, could aid prediction of outcome after radical cystectomy for bladder cancer. Conventional prognostic features (tumor stage, grade, and lymph-node metastasis) are not accurate enough to predict outcomes after radical cystectomy, because patients with similar disease features experience varied outcomes.

In this retrospective study, the authors analyzed apoptosis-related biomarker expression in bladder tumors from 226 patients who had undergone radical cystectomy and bilateral lymphadenectomy for urothelial-cell carcinoma. During follow-up (median 36.9 months), 101 of these patients had experienced bladder cancer recurrence and 82 died of metastatic bladder cancer. Immunohistochemical staining of serial tissue microarrays was used to categorize expression of each marker as either normal or altered. Increasing numbers of altered apoptosis-related markers correlated with a progressively worse prognosis. Alteration of all four markers conferred the highest risks of disease recurrence and death from bladder cancer (hazard ratios 4.03 [$P=0.021$] and 6.84 [$P=0.016$], respectively), independently of conventional prognostic features.

The authors call for prospective clinical trials to elucidate whether these four apoptosis-related markers could be used to direct treatment strategies for patients after radical cystectomy: individuals with altered expression of all four markers might benefit from early initiation of aggressive adjuvant chemotherapy, whereas those with normal marker expression could avoid unnecessary treatments.

Original article Karam JA *et al.* (2007) Use of combined apoptosis biomarkers for prediction of bladder cancer recurrence and mortality after radical cystectomy. *Lancet Oncol* **8**: 128–136