GLOSSARY

VESICoureTERAL
REFLUX

Retrograde flow of urine from the bladder into a ureter, often resulting in hypertension, pyelonephritis, and renal failure

NOCTURNAL POLYURIA

Production of excessive amounts of urine during the night

Prophylactic antibiotics might not benefit patients with vesicoureteral reflux

VESICoureTERAL REFLUX (VUR) is thought to have a role in the pathogenesis of urinary tract infection (UTI), acute pyelonephritis, and renal scarring. Current medical therapies for VUR aim to minimize these sequelae, but are founded on expert opinion rather than objective data. Garin *et al.* conducted a randomized, controlled study to investigate the effects of antibiotic prophylaxis in patients with and without primary VUR.

Their international study evaluated data from 218 patients (aged 3 months to 18 years) who were initially treated for acute pyelonephritis; 113 of these also had VUR. The patients were then randomly allocated to receive prophylactic antibiotics for 1 year, or to no prophylaxis. The authors found that mild or moderate VUR was not associated with the development of renal scarring, nor with an increased incidence of subsequent UTIs or pyelonephritis. Garin *et al.* also found that antibiotic prophylaxis did not prevent or reduce recurrent infection or renal scarring. Among the patients with VUR, seven who received antibiotics developed recurrent acute pyelonephritis, compared with one patient who did not receive prophylactic antibiotics.

A high drop-out rate in the antibiotic prophylaxis group meant that this study was underpowered. The authors claim, however, that because no statistically significant differences were found between treatment groups (despite the analysis being biased towards finding such differences), a fully powered study would have produced similar findings.

Chrissie Giles

Original article Garin E *et al.* (2006) Clinical significance of primary vesicoureteral reflux and urinary antibiotic prophylaxis after acute pyelonephritis: a multicenter, randomized, controlled study. *Pediatrics* 117: 626–632

Diclofenac is effective in treating the symptoms of nocturnal polyuria

Anecdotal evidence that nonsteroidal anti-inflammatory drugs could help relieve nocturia symptoms resulting from NOCTURNAL POLYURIA has been investigated by a team from the UK. Addla *et al.* found that administration of the

nonspecific cyclo-oxygenase (COX) inhibitor diclofenac improved objective parameters of nocturnal polyuria in patients with this common, sleep-disruptive condition.

In their prospective, double-blind, placebo-controlled crossover study, Addla *et al.* randomly allocated 20 male and 6 female patients with nocturnal polyuria (mean age 72 years) to receive a single dose of either 50 mg diclofenac or placebo at 9pm daily for 2 weeks. After a washout period of 1 week, the patients crossed over to the other medication for 2 weeks. Frequency–volume charts were completed in the last week of each 2-week treatment period.

Compared with placebo, diclofenac moderately reduced both the mean frequency of nocturnal micturition (2.7 voids versus 2.3 voids, respectively), and the percentage of total urine produced over 24 h passed at night (44% versus 39%). Both results were statistically significant. There was no change in frequency of micturition or volume of urine produced over 24 h, however, suggesting that diclofenac confers its effects not through fluid retention, but by a transient decrease in urine output during the night, thus redistributing urine output from night to day.

The authors suggest that, because of the predominance of the COX2 isoform in the renal vasculature, a greater effect might be achieved by using a selective COX2 inhibitor.

Chrissie Giles

Original article Addla SK *et al.* (2006) Diclofenac for treatment of nocturia caused by nocturnal polyuria: a prospective, randomised, double-blind, placebo-controlled crossover study. *Eur Urol* 49: 720–726

SLC11A1 polymorphisms might predict response to intravesical BCG

Recurrence of superficial bladder tumors occurs in more than half of patients after transurethral resection, despite immunotherapy with intravesical bacillus Calmette–Guérin (BCG) aimed at preventing recurrence and progression. Animal studies have indicated that responsiveness to BCG might have a genetic component; Decobert *et al.*, therefore, investigated whether polymorphisms of *SLC11A1* (formerly *NRAMP1*), a gene previously linked with human susceptibility to infectious disease, might be associated with response to intravesical BCG.