

## Effects of urinary tract infection in patients with bladder augmentation and kidney transplantation.

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**PURPOSE:** We evaluated the rate of function decline of the renal allograft in patients with augmented bladder. We also evaluated the prevalence of asymptomatic bacteriuria and urinary tract infection in these patients, and to demonstrate if these findings are predictors of allograft function decline, comparing children who underwent bladder augmentation with a control group.

**MATERIALS AND METHODS:** Among 170 children and adolescents undergoing renal transplantation at our institution 23 (14%) had previously undergone bladder augmentation. These patients were retrospectively compared (1:2 ratio) to 42 controls matched for gender, age, race, donor type, weight and immunosuppression protocol. The type of donor (living or cadaver), rate of acute tubular necrosis and cold ischemia time during transplantation were also similar between groups.

**RESULTS:** Mean followup was 18.0 +/- 13.9 months and 25.2 +/- 14.1 months for the augmented and nonaugmented bladder groups, respectively ( $p > 0.05$ ). The incidence of acute rejection within the first 12 months of kidney transplantation was 9% in the bladder augmentation group and 26% in controls ( $p > 0.05$ ). The rate of urinary tract infection or asymptomatic bacteriuria in the first 12 months after kidney transplantation was higher in the bladder augmentation group (19 patients, 83%) compared to controls (7 patients, 17%,  $p < 0.001$ ). Patients with augmented bladder had a higher number of hospital admissions (14 patients, 61%) compared to the control group (12 patients, 29%,  $p = 0.004$ ). Despite the higher incidence of urinary tract infection in the augmented bladder group, there was no statistically significant difference in graft function between the groups at 6 months (1.1 +/- 0.3 mg/dl vs 1.0 +/- 0.3 mg/dl) or 12 months (1.0 +/- 0.2 mg/dl vs 1.2 +/- 0.7 mg/dl) after transplantation.

**CONCLUSIONS:** Our study demonstrated that patients with transplanted kidney and augmented bladder had more asymptomatic bacteriuria and urinary tract infections than those without bladder augmentation. However, the rate of graft survival was similar between the groups.