Augmentation cystoplasty safe for children with neurogenic bladder

March 6 2024, by Elana Gotkine

For children with neurogenic bladder, augmentation cystoplasty (AC) is safe and effective, with low surgical and metabolic complication rates, according to a study published online Feb. 20 in *Scientific Reports*.

Jei-Wen Chang, from the Taipei Veterans General Hospital in Taiwan,

and colleagues examined the risks for metabolic complications, malignancy, long-term outcomes, and histopathologic changes of native bladder and the augmented intestine after AC in 22 pediatric patients with neurogenic bladder.

The researchers found that the urinary continence rate improved from 22.7 to 81.8 percent postoperatively. In 17 of 19 patients, hydronephrosis resolved. In 16 and seven of the refluxing ureter units, vesicoureteral reflux resolved and was downgraded (64.0 and 28.0 percent, respectively). Following AC, significant improvements were seen in grades of hydronephrosis and reflux. A significant increase was also seen in the estimated glomerular filtration rate. The most frequent late complication was formation of urinary tract stones (eight patients; 36.4 percent). One patient had life-threatening spontaneous bladder perforation. No cases of mortality, new-onset symptomatic metabolic acidosis, or changes in serum electrolytes were seen after a mean follow-up of 13.4 ± 5.9 years. No cases of malignancy or metaplastic changes were seen in the native bladder or augmented bowel epithelium among the 17 patients who were followed for more than 10 years.

"AC is a highly reliable treatment option for refractory neurogenic bladder in children," the authors write. "AC successfully increases bladder capacity and compliance, preserves renal function, improves anatomical deterioration of the upper urinary tract, and provides urinary continence."

More information: Jei-Wen Chang et al, Long-term complications and outcomes of augmentation cystoplasty in children with neurogenic bladder, *Scientific Reports* (2024). DOI: 10.1038/s41598-024-54431-z