

 PAEDIATRIC UROLOGY

# Cuff-only AUS for refractory neurogenic incontinence

According to a recent study published in the *Journal of Urology*, the implantation of a cuff-only artificial urinary sphincter (CO-AUS) is safe and efficacious—and associated with fewer complications than complete AUS (C-AUS)—for boys with neurogenic bladder, when performed alongside augmentation cystoplasty.

Since its development in 1973, the efficacy of the AUS device has been well documented in both adults and children, with reported continence rates of 80%; however, there are concerns regarding the potential effects of an AUS on upper urinary tract and prostatic growth in young boys. A CO-AUS can provide sufficient circumferential external pressure to restore urinary continence, but at a lower pressure than a C-AUS, so the ability to spontaneously void is maintained.

In this latest study, Viers *et al.* assessed 18 male patients (median age of 15 years) who underwent simultaneous augmentation cystoplasty and artificial



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urinary sphincter (AUS) placement for refractory neurogenic bladder at the Mayo Clinic, Rochester, USA, from 1982–2012, 13 (72%) of whom underwent CO-AUS.

For these 13 boys, tubing was passed through the rectus muscle and secured to the anterior rectus fascia following cuff placement, such that the reservoir and pump could be easily placed (in an outpatient setting) if needed in the future. For the five boys who received C-AUS, reservoirs and pumps were placed in the prevesical space and scrotum, respectively, and activated 6 weeks after surgery.

10 (77%) of the boys who received CO-AUS were initially continent (for a mean period of 52.9 months), and four (31%) of these boys remained continent for the duration of the study. Ultimately, nine boys (69%) required conversion to C-AUS; these boys were younger than those who required no revision, suggesting that peripubertal growth or increased BMI led to recalcitrant incontinence.

No AUS-specific complications were reported in the CO-AUS group, compared with six in the C-AUS group (in 36% of patients). CO-AUS avoids the placement of additional components, thus decreasing the risk of infection, erosion, and mechanical failure, and reducing costs.

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