

Evidence-based demerits on the use of rectus abdominis musculo-peritoneal flap for bladder augmentation in children with exstrophy bladder

Sir,

We read the article "Closure and augmentation of bladder exstrophy using rectus abdominis musculo-peritoneal flap (RAMP)."^[1] The authors reported the results of RAMP for primary bladder augmentation (BA) in children presenting late with bladder exstrophy (BE) with poor bladder template.^[1] The technique claimed to decrease the morbidity and postoperative complications.^[1] We would differ with these observations. The ideal management of BE aims not just to achieve an anatomical closure of the defect, as illustrated in the present study,^[1] but also to achieve a compliant urinary reservoir of adequate capacity with preserved upper urinary tract along with continence and cosmetically pleasing external genitalia.^[2] The major limitation of this report^[1] is the nonassessment of the functional status of the reconstructed bladder by uroflowmetry and filling cystometry. Moreover, the postoperative ultrasonography (USG) mentioned just about bladder capacity and failed to mention the status of kidneys, ureters, and postvoid residual urine.^[1] Though USG and intravenous pyelography are useful tools to assess upper tract dilatation, yet they lack functional information. In the absence of the renal radionuclide scans, the assessment of upper urinary tracts in this study^[1] is incomplete. It is also pertinent to learn from the authors that when they intend to do the epispadias repair, as the mean age at presentation was 8 years and patients already had a follow-up of 3 years.^[1]

The animal studies^[2] cited to justify the use of RAMP for BA bear little significance. The experimental animals, unlike BE, had normal bladder histology. Morphometric analysis of smooth muscles in BE had shown decreased muscle component, and increased type III collagen in the bladder wall of exstrophy patients.^[3]

An ideal substitute for BA should be able to distend at low pressures with no spontaneous pressure generation.^[4] Follow-up urodynamic studies^[5] in children with RAMP augmented BE, conducted at a mean follow-up of 4 years, failed to show any increase in bladder capacity and compliance with a mean maximum cystometric capacity of 73 ml and compliance of 5.2 ml/cm H₂O. They eventually needed an additional BA with bowel and stomach.^[5] RAMP augmented BE, thus, had small capacity and poor compliance, due to its propensity to shrinkage and fibrosis,^[5] which if left uncorrected can lead to upper tract damage. These urodynamic findings^[5] critically question the role of RAMP as BA substitute for BE in children and limits its role for closure of large post-traumatic bladder defects.

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