

subset of patients careful clinical examination and followup are warranted in all patients to exclude neoplastic disease.

Editorial Comment

The authors report on an impressive numerical series of 90 patients who underwent urethral diverticulectomy. The most common associated clinical finding with the urethral diverticulum was urinary incontinence. Pathologic evaluation of the resected tissue revealed 10% with atypical glandular findings; consequently, the authors urged the readership to have careful follow-up in those patients secondary to the association with invasive adenocarcinoma.

This large series on urethral diverticula warrants reading and review by those actively involved in female urology. Though the most common clinical finding associated with urethral diverticulum was urinary incontinence, 4 out of the 5 patients who had a carcinoma of the involved urethral diverticulum presented with urinary retention. In addition, the authors noted that a review of the position of nephrogenic adenomas throughout the urothelial tract identified a higher prevalence in the urethral diverticulum. This would be something to keep in mind on evaluating a urethral diverticulum that is associated with a submucosal mass. The high mortality rate quoted in this series for patients with invasive adenocarcinoma involving a urethral diverticulum highlights the importance of close follow-up in those patients that have atypical glandular findings on pathologic analysis of the resected diverticulum.

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PEDIATRIC UROLOGY

Updated experience with the Monti catheterizable channel

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Objectives: The Monti catheterizable channel is used as an integral part of continent bladder reconstruction in children. We have updated our ongoing experience at Riley Children's Hospital with 199 patients.

Methods: We identified 199 patients for retrospective review, including all patients for whom a Monti ileovesicostomy was created from January 1997 to August 2004. We assessed the complications, surgical procedures, and stomal continence.

Results: At mean follow-up of 28 months, we found that 194 of 199 patients (97.5%) continued to use their Monti catheterizable channel for bladder drainage. Early surgical complications occurred in 7 patients (3.5%), usually in those who had undergone simultaneous bladder augmentation (5 of 7). Revision was required in 16 patients (8%) for stomal stenosis (n = 11), prolapse (n = 2), or superficial stomal problems (n = 3). Of the 199 patients, 17 (8.5%) required 19 bladder or channel revisions. The primary indications were related to elongation and angulation of the channel in 7 and deficient tunnel length in 8. Minor difficulty with catheterization was noted in 16 patients (8%), and endoscopy with minor procedures was required in 4 patients (2%). Leakage from the channel was uncommon, occurring in only 4 of 115 patients (3.5%).

Conclusions: With increasing demand for simultaneous appendicocecostomy for stool continence at bladder reconstruction, we continue to use the Monti ileovesicostomy for bladder drainage. Our experience with nearly 200 patients has demonstrated the durability and success of this technique.

Editorial Comment

During a seven-year period, 199 patients underwent a Monti catheterizable stoma procedure, 90 male and 109 females. Eighty-eight percent of the patients had a neuropathic bladder and over 97% of the patients underwent an additional simultaneous procedure. Seventy percent of them had bladder augmentations at the same time. Seven patients (3.5%) had early surgical complications. Sixteen (8.0%) had stomal revisions and 19 patients (9.5%) underwent channel revisions. Sixteen (8.0%) of the patients had difficulty catheterizing and 4 (3.5%) had incontinence after the channel was made.

The authors conclude that this is a favorable outcome to a catheterizable stoma. This is their procedure of choice when the appendix is used for appendicocecostomy bowel irrigation regimen. They preferred a spiral Monti technique whenever a longer channel is required, rather than a double Monti technique.

The authors have a mean follow up of 28 months and their results are favorable compared to their own and another study in the literature. Even though the complication rate seems high, these patients benefit greatly from a continent catheterizable stoma. Most of the complications and revisions are on the stoma and channel itself and the channel can be made functional and the patients and caregivers will be highly satisfied.

It should be noted that one or two other complications were in non-compliant patients and particularly when a continent catheterizable stoma is considered, careful attention to patient compliance before the surgery is performed will minimize these unfortunate complications afterwards. If the catheterizable stoma is not used for a brief period of time, often it closes and cannot be recovered.

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Corporeal grafting for severe hypospadias: a single institution experience with 3 techniques

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Purpose: Correction of severe chordee by corporeal body grafting has been successfully performed using various grafts and biomaterials. We report a single institution comparison of our experience using small intestinal submucosa, tunica vaginalis and dermal grafts at stage 1 hypospadias repair.

Materials and Methods: A retrospective chart review was performed of the records of all patients who underwent staged hypospadias repair from 1985 to 2006 with corporeal body grafting at stage 1 with small intestinal submucosa, tunica vaginalis or dermal grafts. Age at grafting, time between stages, residual chordee at stage 2 repair and the need for additional plication or chordee correction at stage 2 were recorded.

Results: A total of 71 patients were identified with a median age of 10 months at stage 1 repair and a median of 7.6 months between stages 1 and 2 repair. Dermal grafts, tunica vaginalis and small intestinal submucosa grafts were used in 29, 21 and 20 patients, respectively. One patient received a combination of small intestinal submucosa and tunica vaginalis. None of the patients receiving tunica vaginalis graft required any further correction of chordee. One patient with a dermal graft and 1 receiving small intestinal submucosa required Nesbit

plication at stage 2 repair for minor ventral chordee. One patients receiving small intestinal submucosa showed severe fibrosis at the graft site, requiring excision and repeat grafting with tunica vaginalis. This patient has been previously described. The 2 patients with small intestinal submucosa related complications had 4-ply grafts. We have seen no complications associated with 1-ply small intestinal submucosa. At limited followup we have not seen residual chordee after stage 2 repair.

Conclusions: In a large group of children requiring corporeal grafting for severe chordee we observed successful chordee correction with 1-ply small intestinal submucosa, tunica vaginalis or dermal grafts.

Editorial Comment

A 20-year experience of corporeal grafting in a staged hypospadias procedure is reported. Grafts were either small intestine submucosa, tunica vaginalis or dermal grafts. All of the patients have completed a second stage hypospadias repair. The urethral plate was divided when routine maneuvers to correct chordee still left 45° of ventral curvature. Tunica vaginalis was used as a graft in all the cases rather than a flap and each of the grafts were approximately 25% larger than the corporeal defect that was created to correct the chordee. Graft placement and success were verified after suturing the graft in place by an artificial erection.

Initially for the SIS graft, 4-ply SIS was used in 12 patients and subsequently 1-ply has been used. Of the 71 patients in this study, the median age was 10 months. 29 dermal grafts, 21 tunica vaginalis grafts and 20 SIS grafts were used. One of the dermal graft patients and one of the 4-ply SIS patients required a subsequent repair. The authors concluded that each of the grafting materials were successful. They note that they have not used 4-ply SIS for several years and that long-term and post-pubertal outcome is not available.

This manuscript shows that over two decades, several types of grafting materials have been used and each showing good success. In skilled hands, there is not a reason to choose one graft material over another. The second stage of the repair was not made more difficult by any of the graft procedures and it is heartening to know that the surgeon can make a personal and patient-appropriate choice and expect good outcomes.

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