

radiotherapy. In conclusion, relative long-term survival is possible in this cohort of patients and multimodal treatment should aim at eradicating all disease possible.

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NEUROUROLOGY & FEMALE UROLOGY

Nonsurgical transurethral collagen denaturation for stress urinary incontinence in women: 12-month results from a prospective long-term study

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Study Objective: To assess efficacy of nonsurgical transurethral collagen denaturation (Renessa) in women with stress urinary incontinence (SUI) caused by bladder outlet hypermobility.

Design: Continuing, prospective, 36-month, open-label, single-arm clinical trial. Twelve-month results from intent-to-treat (ITT) analysis are reported. Canadian Task Force classification II-2.

Setting: Thirteen physician offices or ambulatory treatment centers.

Patients: Women with SUI secondary to bladder outlet hypermobility for 12 months or longer who failed earlier conservative treatment and had not received earlier surgical or bulking agent therapy.

Interventions: Women were treated as outpatients and received an oral antibiotic and local periurethral anesthesia before undergoing treatment with transurethral radiofrequency collagen denaturation.

Measurements and Main results: Voiding diaries and in-office stress pad weight tests yield objective assessments. Subjective measures include the Incontinence Quality of Life (I-QOL), Urogenital Distress Inventory (UDI-6), and Patient Global Impression of Improvement (PGI-I) instruments. In total, 136 women received treatment (ITT population). Patients experienced significant reductions versus baseline in median number of leaks caused by activity/day and activity/week ($p < .0026$ for both), with 50% of patients reporting 50% or more reduction. Pad weight tests revealed that 69% of women had 50% or more reduction in leakage (median reduction 15.2 g; $p < .0001$); 45% were dry (29% no leaks; 16% < 1 -g leakage). Significant improvements occurred in median scores on the I-QOL (+9.5 [range -66.0 to 91.0]; $p < .0001$) and mean scores on the UDI-6 (-14.1 +/- 24.7; $p < .0001$). Furthermore, 71.2% showed I-QOL score improvement, including 50.3% with 10-point or greater improvement, and 49.6% reported on the PGI-I that they were “a little,” “much,” or “very much” better. **Conclusion:** At 12 months, treatment of SUI with nonsurgical transurethral collagen denaturation resulted in significant improvements in activity-related leaks and quality of life.

Editorial Comment

Authors report on the therapy of female stress urinary incontinence using transurethral radiofrequency (RF) collagen denaturation. This report entails the 12-month results from an ongoing 36-month intent to treat study. The authors identified the following: no significant adverse events; that the procedure was very well tolerated; and using this minimally invasive technique, results similar to transurethral bulking agents were obtained.

This review revisits a new technology which has been previously surveyed in this journal (1). In that study, the authors noted the safety of the therapy as well as its clinical efficacy when reported in comparison to a sham treatment. Though the study did report a significant number of patients who were lost to follow-up, withdrew consent, or opted for surgery, this is not unexpected in view of the large number of study centers (13 centers) which were incorporated into the study. Of note is that the procedure appears to be very safe, very fast and highly competitive with bulking therapy in the patient with urethral hypermobility. This refined application of the radiofrequency energy to alter collagen is distinctly different from the ablative therapy used for neoplastic conditions or benign gynecological diagnoses. Though the therapy does not appear to preclude further surgery, it should be avoided in patients who already have injectable therapy secondary to potentially variable application of the energy to the periurethral implant. That this technology may be applied in the office with the use of a local periurethral anesthetic and has a very short post-procedure convalescence period renders it a therapeutic option that warrants a close review by treating physicians.

Reference

1. Petrou SP: Editorial Comment (On: Appell RA, Juma S, Wells WG, Lenihan JP, Klimberg IW, Kanellos A, Reilley SF: Transurethral radiofrequency energy collagen micro-remodeling for the treatment of female stress urinary incontinence. *Neurourol Urodyn.* 2006; 25: 331-6.). *Int Braz J Urol.* 2006; 32: 739-40.

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Urethral diverticula in 90 female patients: a study with emphasis on neoplastic alterations

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Purpose: Urethral diverticula are uncommon and occur predominantly in women. We examined a large series of female urethral diverticula to determine associated neoplastic alterations and subsequent clinical outcomes.

Materials and Methods: All pathological evaluations of female urethral diverticulectomies performed at our institution between 1981 and 2007 were retrospectively reviewed and the clinicopathological features were correlated.

Results: During this period 90 women underwent urethral diverticulectomy at our institution. Patient age was 24 to 78 years (mean 45). The most common clinical finding was urinary incontinence (29 of 78 women or 37%). Diverticular size was 0.3 to 5.0 cm (mean 1.7). Neoplastic alterations identified in 5 patients (6%) were glandular in nature, including 1 clear cell and 4 invasive adenocarcinomas. Superficial changes associated with invasive carcinoma included villous adenoma in 1 case, intestinal metaplasia in 2 and high grade dysplasia in 3. An additional 3 patients had extensive intestinal metaplasia. Of the 90 patients the remaining 82 demonstrated benign findings, including nephrogenic adenoma in 10 (11%). All 5 patients with invasive carcinoma underwent anterior pelvic exenteration with urinary diversion. In 2 patients with invasive adenocarcinoma metastatic disease subsequently developed, of which they died.

Conclusions: Although most cases of surgically resected diverticula demonstrate benign features, approximately 10% show atypical glandular findings, including invasive adenocarcinoma. Due to the risk of malignancy in a

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%).