

Urogynecology digest

Presented by Tamara Grisales

Diagnostic yield of cystoscopy in the evaluation of recurrent urinary tract infection in women

Pagano MJ, Barbalat Y, Theofanides MC, Edokpolo L, James MB, Cooper KL. *Neurourol Urodynam.* 2017;36:692–696. DOI: [10.1002/nau.22998](https://doi.org/10.1002/nau.22998)

This was a single institution, retrospective study of patients presenting with recurrent urinary tract infection (UTI) who underwent cystoscopy between January 2010 and July 2014. The primary outcome of this study was the overall yield of positive cystoscopic findings on workup in addition to the yield of findings that were missed on imaging. Recurrent UTI was defined as three or more infections over 12 months or two infections over 6 months. Cystoscopy was offered to patients with previous urological history, persistent infection following culture-specific treatment, or recurrent infection despite preventive measures such as behavioral changes, topical estrogen treatment, and prophylactic regimen. Patients with additional indications for cystoscopy, such as hematuria, neurogenic bladder, congenital urinary tract abnormality, or urothelial malignancy, were excluded. Imaging by either renal/bladder ultrasound (RBUS) or computed tomography (CT) was also recommended to all patients undergoing cystoscopy. Cystoscopy was performed by a urologist with a 16.5-Fr flexible cystoscopy to survey the bladder and urethra circumferentially. Abnormal findings on cystoscopy included urethral strictures, bladder stones,

diverticula, ureterocele, fistulas, foreign bodies, and masses. Bladder biopsy and urine cytology were ordered for patients with suspicious lesions.

In total, 163 women underwent cystoscopy for recurrent UTI as the sole indication. Nine cystoscopies yielded significant findings (5.5%). All 9 patients also underwent imaging, and 5 had findings on cystoscopy that were not identified on imaging. These included bladder diverticulum, urethral stenosis, foreign body, and carcinoma in situ. Of the 133 (81.6%) patients who had imaging available, 111 underwent RBUS and 22 underwent CT. Among these patients, 18 of the 133 (13.6%) had significant findings on cystoscopy. Cystoscopy was normal in 93.9% of patients with normal imaging. The authors also attempted to risk stratify the patients to compare the yield of cystoscopy in high-risk versus low-risk patients. The high-risk group included patients with a history of renal transplant or urogynecological surgery. There was no difference in the risk of abnormal cystoscopic findings between groups.

Despite the high prevalence of UTIs worldwide, there are currently no practice guidelines for the management of recurrent UTI in women. The overall yield of cystoscopy appears to be low in the evaluation of recurrent UTI. In this study, less invasive tools, such as RBUS and CT, identified at least half of the findings visualized on cystoscopy. The diagnostic overlap of cystoscopy with imaging for the evaluation of recurrent UTI in addition to the cost and risks associated with cystoscopy suggest the need for further study and practice guidelines.

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