

## INCIDENCE OF SURGICAL RECURRENCE OF URETHRAL DIVERTICULA: A CONTEMPORARY SERIES

### Hypothesis / aims of study

Reported rates of urethral diverticula recurrence are based on older data, and from studies using voiding cystourethrography for diagnosis. We sought to determine incidence of recurrence as well as risk factors for failure in a contemporary series of patients with urethral diverticula.

### Study design, materials and methods

We performed a retrospective review of patients who underwent urethral diverticula repair at our institution from 1996 to 2008. Patient demographics, body mass index, preoperative imaging, intraoperative findings, as well as subsequent surgical treatment of recurrence were evaluated. Possible risk factors for recurrence such as size, shape, location, and the presence of multiple diverticula were recorded.

### Results

126 female patients underwent urethral diverticulectomy at our institution over the study period. Mean age at the time of surgery was 46.1 years with a mean follow-up of 15.7 months. 82 (65.1%) patients had Magnetic Resonance Imaging as part of their evaluation. Mean size of diverticula on preoperative imaging was 2.1 cm. Overall, (7/113) 6.2% of patients undergoing a primary repair recurred. Of patients undergoing secondary repair (n=13), 4 (30.8%) recurred. Compared with patients having a successful repair, patients having a recurrence were more likely to have had prior urethral or vaginal surgeries (18.8% vs. 72.7%;p<0.001), proximal diverticula (54.5% vs. 21.4%;p<0.001), or circumferential diverticula (27.3% vs. 12.8%;p<0.001). Patients having a failure were obese, but the difference was not statistically significant (mean Body Mass Index 31.5 vs 28.7 kg/m<sup>2</sup>;p=0.22). Additionally, a higher proportion of failures had multiple diverticula on presentation, however, the difference was not statistically significant (36.4% vs. 14.5%;p=0.086) There were no statistically significant differences with regards to patient age, size of the diverticula, or placement of a sling at the time of diverticula repair.

### Interpretation of results

This study represents the largest series in the literature to date. The recurrence rate of primary urethral diverticulum repair in our contemporary series (6.2%) was lower than previously published rates in the literature for a primary repair.

### Concluding message

Patients presenting with a prior failure, larger, more proximal, circumferential, or multiple diverticula should be counseled appropriately with regards to their increased risk of recurrence. We believe preoperative Magnetic Resonance Imaging allows for not only improved diagnostic accuracy, but also proper intraoperative management of urethral diverticula.

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<b><i>Is this a clinical trial?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>Yes</b>
<b><i>Specify Name of Ethics Committee</i></b>	<b>Institutional Review Board, Cleveland Clinic</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>