

SIMPLE VERSUS COMPLEX URETHRAL DIVERTICULUM: PRESENTATION AND OUTCOMES

Hypothesis / aims of study

Urethral diverticulum (UD) may present with a wide range of symptoms and configurations. Though different surgical techniques may be needed for repair depending on the anatomy, it is unclear whether more complex anatomical configurations such as circumferential urethral diverticula (cUD) may have a different presentation or confer a worse prognosis as compared to simple urethral diverticula (sUD). We reviewed the presentation and operative outcomes of cUD and sUD in order to determine whether the anatomic configuration confers unique presenting symptoms or impacts the surgical outcome.

Study design, materials and methods

Following IRB approval, a retrospective review of patients who underwent transvaginal urethral diverticulectomy at a single institution over an 8-year period was performed. A total of 48 patients were identified of which 12 were found to have cUD. Eleven of 12 cUD were repaired using a technique with complete division of the urethra to access the dorsally located portion of the UD, followed by end-to-end anastomosis for urethral reconstruction. All patients who underwent transvaginal urethral resection were included in this study. A Martius flap and/or autologous fascial pubovaginal sling (aPVS) were performed as needed. Presenting symptoms and surgical outcomes were reviewed.

Results

Mean age was 51.8 years in the cUD vs. 52.2 years in the sUD. Patients with cUD were more likely to present with pelvic pain/dyspareunia compared to those with sUD (92% vs 53%, $p=0.02$) while there was no difference in regards to SUI, urgency, post-void dribbling, and UTI. In regards to operative management, patients with cUD were no more likely to undergo concomitant autologous fascial sling than patients with sUD (14 (58%) vs 7 (39%), $p=0.25$). Postoperatively patients with cUD were similar to patients with sUD in the incidence of UTI, SUI, urgency, and retention. Calculi were identified in 3 simple diverticula. Postoperative complications included one case of bladder outlet obstruction (BOO) in each group, one of which underwent transvaginal sling incision, recurrent UD in 6 patients (4 cUD vs 2 sUD, 33% vs 6% $p=0.01$), *de novo* SUI (8% vs 6% $p=0.73$), one urethral stricture requiring dilation x1 (cUD) and one mesh erosion into the vagina (sUD).

Interpretation of results

Patients with cUD are more likely to present with pelvic pain/dyspareunia when compared to sUD, however other presenting symptoms are similar between groups. Although the rate of subsequent aPVS, at time of repair was higher in patients with cUD, this was less likely to affect surgical outcomes between both groups. Recurrent diverticula were significantly more common in patients with cUD, which suggests that the anatomical configuration affects recurrence rate.

Concluding message

Overall, patients with cUD have similar presentation and clinical outcomes regarding postoperative symptoms when compared to patients with sUD. However, based on our results the anatomical presentation may affect the rate of recurrent UD.

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Institutional Review Board for Human Research, The Medical University of South Carolina **Helsinki:** Yes **Informed Consent:** Yes