

# Transvaginal Cystolithotomy: A Novel Approach



JJ H. Zhang, Jessica C. Lloyd, Juan M. Guzman-Negron, and Howard B. Goldman

**OBJECTIVE** To describe a novel surgical option for cystolithiasis management in female patients with no urethral access and prior abdominal surgeries. We present a 51-year-old female with a history of traumatic spinal cord injury with pelvic fractures and resultant neurogenic bladder. She underwent transabdominal bladder neck closure and bladder augmentation with continent diversion 2 years prior. CT abdomen/pelvis demonstrated a 3 cm stone and significant amount of bowel anterior to the bladder.

**METHODS** Pouchoscopy was performed via ureteroscope through the catheterizable stoma to assess stone location and mobility. A 14F-Foley was inserted for intraoperative decompression. An inverted-U incision was made on the anterior vaginal wall overlying the bladder base. Sharp and blunt dissection was performed in an avascular plane to dissect the vagina off of the bladder. Electrocautery was utilized to open perivesical tissue and the detrusor layer transversely. Further sharp dissection of perivesical tissue was achieved using Metzenbaum scissors. The bladder was filled via stoma Foley to improve visualization of bladder mucosa. Cystotomy was made and the 3 cm stone was removed, intact, using a Babcock. The bladder was closed in 2 layers with absorbable suture in running fashion. The bladder was refilled and the closure was watertight. The outer detrusor layer was closed with running locking 2-0 Polysorb, and a separate layer of perivesical tissue was closed over our 2-layer bladder closure using simple interrupted stitches. The vaginal flap was closed with running-locking 2-0 Polysorb.

**RESULTS** Operative time was 55 minutes. Estimated blood loss was 25 cc. The patient was discharged on postoperative-day 0 with a 14F-Foley in the catheterizable channel. The Foley was removed at the 3-week postoperative visit and patient resumed self-catheterization. No postoperative imaging was required. No complications were reported within 1 year.

**CONCLUSION** We demonstrate the feasibility of transvaginal cystolithotomy in females with bowel overlying bladder and no urethral access. UROLOGY 132: 213, 2019. © 2019 Elsevier Inc.

Figure 1.



**Figure 1.** Computerized tomography (CT) abdomen/pelvis scan demonstrating a 3-cm bladder stone and significant amount of bowel overlying the bladder.

Video Clips cited in this article can be found on <https://doi.org/10.1016/j.urology.2019.06.017>.

**Declarations of Interest:** None.

From the Glickman Urological & Kidney Institutes, Cleveland Clinic Foundation, Cleveland, OH

Address correspondence to: JJ H. Zhang, M.D., Glickman Urological & Kidney Institutes, Cleveland Clinic Foundation, 9500 Euclid Ave, Q10-1, Cleveland, OH 44195. E-mail: Zhangh3@ccf.org

Submitted: March 18, 2019, accepted (with revisions): June 15, 2019