A healthy 54-year-old male was referred to the kidney stone clinic for a mildly symptomatic left kidney stone. His history was significant for right renal agenesis, making the stone in his left kidney a more pressing issue. Notably, he also had a 20-year history of intermittent prostatitis with symptoms of dysuria, frequent urination and pelvic pain. The patient experienced these symptoms four to five times a year, and they typically improved with antibiotic therapy. However, he maintained a sensation of constant perineal pressure. His right renal agenesis had been diagnosed on CT five years earlier while he was undergoing workup for irritative voiding symptoms. At that time, it also was noted that he had a 3 cm right seminal vesicle cyst. On digital rectal exam, he had a palpable mass posterior to the right prostatic base, and CT imaging confirmed the persistence of a 3.3 cm right seminal vesicle cyst exhibiting mild compression on the rectum (Figure).

After successful treatment of his left kidney stone, focus shifted to his urinary and pelvic symptoms. He was offered options of transrectal ultrasound-guided drainage or robot-assisted or open excision of the cyst. The patient had excellent baseline sexual function and was concerned that the nerves connected with erections and urinary continence could be affected by surgical excision, so he initially elected for transrectal drainage.

The cyst contained gelatinous, hemorrhagic fluid that was negative for organisms on gram stain. Cytology was negative for malignancy, and bacterial culture of this fluid was negative.

The patient’s irritative symptoms and pain resolved for the next six months. But the sensation of “sitting on a tennis ball” returned within one month of drainage. Ultrasound imaging confirmed the recurrence of the cyst. Over the next two years, the patient required several courses of antibiotic therapy for his symptoms. He eventually elected to undergo surgical excision of the cyst, which was done using the da Vinci robot. During dissection, it was noted that the right vas deferens demonstrated some atresia and appeared to insert directly into the cyst. Surprisingly, a second tubular structure in the cyst had the appearance of an ectopic insertion of his right ureter. Pathologic review confirmed this to be a dysplastic ureter. The patient was without symptoms at initial postoperative follow up.

**Discussion**

Zinner’s syndrome is a triad of Mullerian duct abnormalities—unilateral renal agenesis, ipsilateral seminal vesicle cyst and ejaculatory duct obstruction. An obstruction at the level of the ejaculatory duct leads to gradual accumulation of secretions in the seminal vesicle with consequent cyst formation. Patients with this malformation present with nonspecific pelvic or perineal pain, dysuria, painful ejaculation, chronic recurrent epididymitis/prostatitis and occasionally infertility. Diagnosis is usually made in the third or fourth decade of life, but there are reports of patients being diagnosed in their teenage years.

Approximately 10% to 15% of males with unilateral renal agenesis will have an associated congenital abnormality of the reproductive tract, as both originate from the mesonephric (Wolfian) duct. During embryogenesis, the mesonephric duct de-
velops into the hemitrigone of the bladder, bladder neck, the proximal urethra, seminal vesicle, vas deferens and epididymis under the influence of testosterone and anti-mullerian hormone.²

Fewer than 100 cases of Zinner’s syndrome are reported in literature.³ Although uncommon, it is an important diagnostic consideration when patients present with recurrent urinary symptoms or pelvic discomfort, especially if coupled with infertility. Diagnosis is confirmed with modern-day imaging, with MRI being the most accurate in differentiating seminal vesicle cysts from other pelvic cystic malformations.

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FIGURE

CT Coronal and Axial Images

Learning points
- Although uncommon, Zinner’s syndrome is an important diagnostic consideration when patients present with recurrent urinary symptoms or pelvic discomfort, especially if coupled with infertility.
- Up to 15% of males with unilateral renal agenesis will have an associated congenital abnormality of the reproductive tract.

REFERENCES