

Laparoscopic Excision of a Congenital Seminal Vesicle Cyst and Coexisting Ipsilateral Renal Agenesis

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= Abstract =

Seminal vesicle cyst (SVC) with ipsilateral renal agenesis is a rare congenital anomaly. When the patient is symptomatic, surgical treatment may be necessary. The open surgical approach, traditionally considered the definite form of treatment, has been associated with a high rate of morbidity. The laparoscopic approach for the management of SVCs has recently been described. A 18-year-old man presented with a 2-year history of dysuria and perineal pain. The diagnostic evaluation revealed a 45×35×48 mm sized left seminal vesicle cyst. In addition, he had a solitary, right, functioning kidney, with left renal agenesis. Transperitoneal laparoscopic excision of the cyst was performed successfully. The patient was discharged from the hospital on the fourth postoperative day and did not present with any complaints or complications.

Key Words: Seminal vesicle, Cyst, Renal agenesis

Most seminal vesicle cysts (SVCs) are congenital, and two thirds are associated with renal dysplasia or agenesis with an ectopic ureter opening into the seminal vesicle. Surgical treatment is indicated for symptomatic patients. However, the seminal vesicle is difficult to access surgically, and all transrectal, transurethral, or open surgical approaches have inherent shortcomings. Recently, laparoscopy has become an alternative approach to seminal vesicle disease that offers an excellent intraoperative approach and minimal postoperative morbidity. We report a case of laparoscopic excision of a left seminal vesicle cyst in a young patient with ipsilateral renal agenesis.

Case Report

An 18-year-old male patient was referred to the urology clinic with a 2-year history of perineal pain and dysuria. Conservative treatment did not provide symptomatic relief. Digital rectal examination revealed a large cystic mass in the left prostate region. Routine biochemical examination of the blood and urine was unremarkable.

Pelvic CT and MRI revealed a 45×35×48 mm left seminal vesicle cyst (Fig. 1). In addition, the patient had a solitary right functioning kidney, with no evidence of a left renal unit.

Transperitoneal laparoscopic excision of the cyst was performed. Four laparoscopic ports were used: a 10-mm port at the umbilicus, a 5-mm port in the middle in the proximity of the pubis, and a 5-mm and a 10-mm port on the left and right sides lateral to the rectus muscle, respectively.

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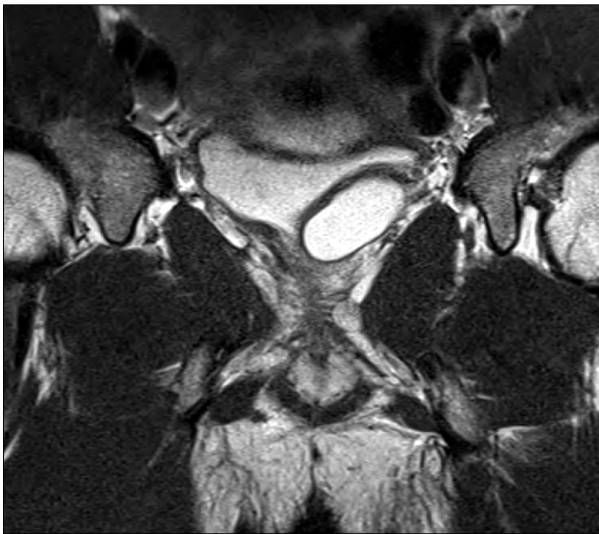


Fig. 1. Coronal view of pelvis MRI showing a left seminal vesicle cyst.

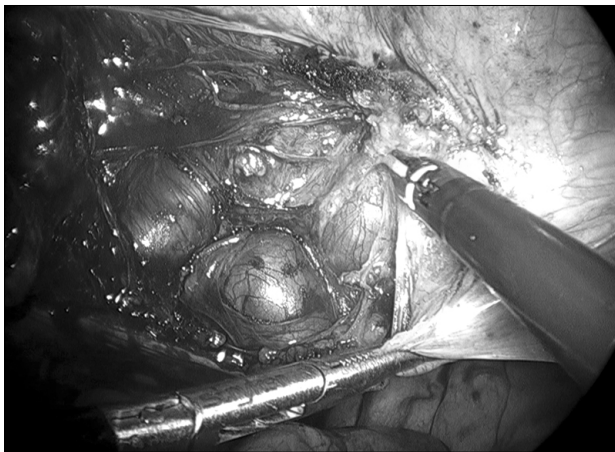


Fig. 2. Operative view under laparoscopy. The dilated seminal vesicle cyst is exposed.

The patient was placed in the Trendelenburg position. The bladder was retracted anteriorly, and an incision was made in the retrovesical peritoneum. The dilated left vas deferens was easily identified and dissected medially to the ampulla, which was used as a guide to the seminal vesicle. The dilated seminal vesicle was punctured and drained (Fig. 2). A blunt dissection was used to expose the anterior and posterior aspects of the seminal vesicle with Hem-o-lok clips applied close to the seminal vesicle to control the vascular supply. The entire cystic specimen was extracted through the 12-mm port.

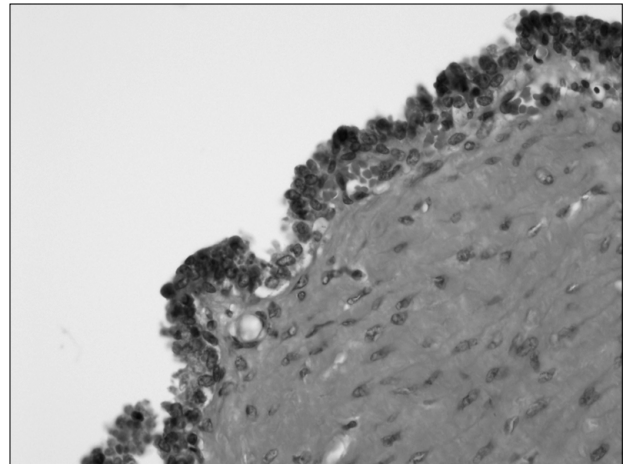


Fig. 3. Histopathological findings of the seminal vesicle cyst. The cyst is lined by cuboidal epithelium with a fibrous wall of variable thickness (H&E, $\times 400$).

The total operative time was 160 minutes, and blood loss was minimal. The patient was discharged from the hospital on the fourth postoperative day and did not present with any complications thereafter. The patient has been asymptomatic during 1 year of follow-up care. Histopathological examination confirmed the diagnosis of SVC (Fig. 3).

Discussion

SVCs are exceedingly rare lesions that may be either congenital or acquired in origin. Most of them have congenital causes, which are believed to be secondary to the obstruction of the ejaculatory duct, and two-thirds are associated with renal agenesis or dysplasia. The formation of a congenital SVC with ipsilateral renal agenesis is believed to result from the abnormal development of the distal portion of the mesonephric duct.¹ However, in the absence of associated genitourinary abnormalities, acquired cysts can be caused by ejaculatory duct obstruction as a result of genitourinary inflammation, ejaculatory duct lithiasis, or transurethral prostatectomy.²

Most SVCs are diagnosed in adults during the third to fifth decade of life.³ Symptoms may develop due to the irritation of adjacent organs by an enlarged and inflamed SVC. Cyst distension may cause perineal or pelvic pain, hemospermia, postcoital pain, or painful

defecation.⁴ Bladder irritation can cause frequency, urgency, dysuria, and hematuria. These patients have frequently been misdiagnosed and thus treated with multiple courses of antibiotics without symptom resolution.⁵

The diagnostic workup includes physical examination, transabdominal and/or transrectal ultrasonography, computed tomography, and/or magnetic resonance imaging. Additional studies include intravenous urography, retrograde cystourethrography, cystoscopic examination, and vesiculography.⁶

Treatment is indicated for symptomatic cases. However, conservative management has not usually been effective, and surgical management may be necessary for the relief of symptoms. Surgical treatment of symptomatic SVCs has included transrectal ultrasonography-guided fine needle cyst aspiration, transurethral unroofing, transurethral resection of the ejaculatory duct, transurethral endoscopic aspiration, or open surgical excision.

The open surgical approach, traditionally considered to be the definitive form of treatment, has been associated with a high rate of morbidity. Significant complications have been reported, for example, rectal wall laceration, ureteral injury, injury to the erectile neurovascular bundle, and pelvic urinoma.⁷

Recently, laparoscopy has been advocated as an optimal, minimally invasive technique for surgical treatment. Laparoscopic SVC excision provides excellent visualization of the retrovesical space compared to open resection. The vas deferens can be easily identified and used as a surgical guide to locate the seminal vesicle. Also, without damaging the bladder and rectum, the seminal vesicle can be dissected from the peritoneum that is covering the bladder and prostate. Recently, many medical centers have reported successful laparoscopic excisions of seminal vesicle cysts.^{8,9} The advantages of the laparoscopic approach are the simplicity of convalescence, minimal pain, the lack of need for a prolonged bladder catheter, and the possibility of immediate feeding. The patient had minimal postoperative pain, quick recovery, and complete symptom resolution. The laparoscopic approach af-

fords minimal postoperative morbidity, effective surgical extirpation, short hospitalization, and rapid recovery for the patient. In conclusion, laparoscopy is likely to be the optimal surgical approach for treating most symptomatic seminal vesicle space-occupying lesions.

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