Case Report

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LAPAROSCOPIC REMOVAL OF SEMINAL VESICLE CYST WITH ECTOPIC URETERAL INSERTION AND RENAL REMNANT

GILBERTO BUOGO, HENRIQUE RODRIGUES, PAULO RODRIGUES

Albarran Institute of Urology, Rio de Janeiro, RJ, Brazil

ABSTRACT

Seminal vesicle cysts associated with ectopic ureter and renal agenesis is a rare condition. We report on a 23-year-old man with a history of pelvic discomfort and post-coital testicular pain. The investigation disclosed a left seminal vesicle cyst, and an absent left kidney. The patient was successful submitted to resection of the left seminal vesicle, ureter, and dysplastic renal tissue altogether, through laparoscopic approach. Laparoscopy has shown to be an excellent treatment option for this rare condition.

Key words: laparoscopy; urinary tract; seminal vesicles; abnormalities
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INTRODUCTION

Seminal vesicle cysts associated with ectopic ureter and renal agenesis are a rare condition, with approximately 50 reports published about this theme (1).

We describe a case of a seminal vesicle cyst associated with ectopic ureter, and dysplastic renal tissue, treated through a laparoscopic approach.

CASE REPORT

A 23-year-old man presented with a 2-year complaint of left inguinal discomfort, and post-coital pain on the left testis. On physical exam, both testes were normal, and a dilated left *vas deferens* **C**ould be palpated. Abdominal ultrasound revealed absence of the left kidney, and an enlarged left seminal vesicle, which was confirmed by a transrectal ultrasound (Figure-1). Pelvic magnetic resonance imaging showed absence of the left kidney, and a large left seminal vesicle with a redundant *vas deferens* **(**Figure-2). The patient was submitted to transperitoneal laparoscopy, with the camera placed at the umbilicus, and 3 auxiliary ports (11mm at the left lateral border of the rectus muscle, a 5mm port at its right lateral border, and another 5mm port on the right iliac fossa, allowing anterior

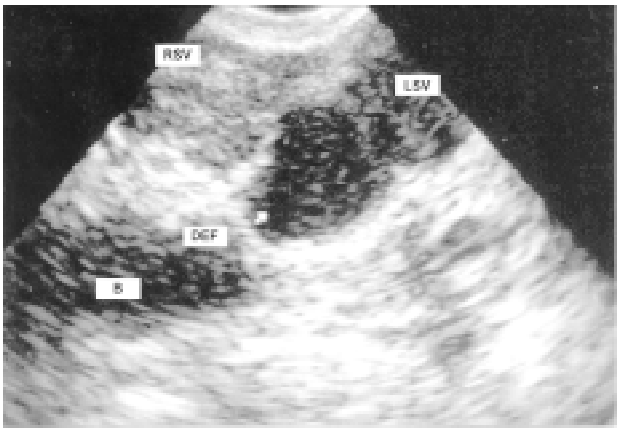

***Figure 1** - Transrectal ultrasound showing normal right seminal vesicle (RSV), an enlarged left seminal vesicle (LSV), and vas deferens (DEF); B = bladder.*

***Figure 2** - Pelvic magnetic resonance imaging revealed an enlarged left seminal vesicle (lower arrow), and a redundant vas deferens (upper arrow).*

traction of the bladder). The retrovesical peritoneum was opened and the left *vas deferens* clipped and divided. The left seminal vesicle was then dissected to the prostate base, where it was divided. The insertion of the left ureter was at the lateral aspect of the seminal vesicle. It was isolated and dissected cephalad after mobilizing the colon. Another 5mm trocar was placed at the midline, above the umbilicus, because of the very cranial position of the proximal ureter and remnant kidney. At the usual kidney location, the ureter entered a dysplastic tissue. This tissue was dissected and removed altogether with the left ureter and the seminal vesicle (Figure-3). Operative time was 290 minutes, and estimated blood loss was 180mL. The patient was discharged home on postoperative day 2. Pathological analysis of the dysplastic kidney revealed renal parenchyma with fetal characteristics.

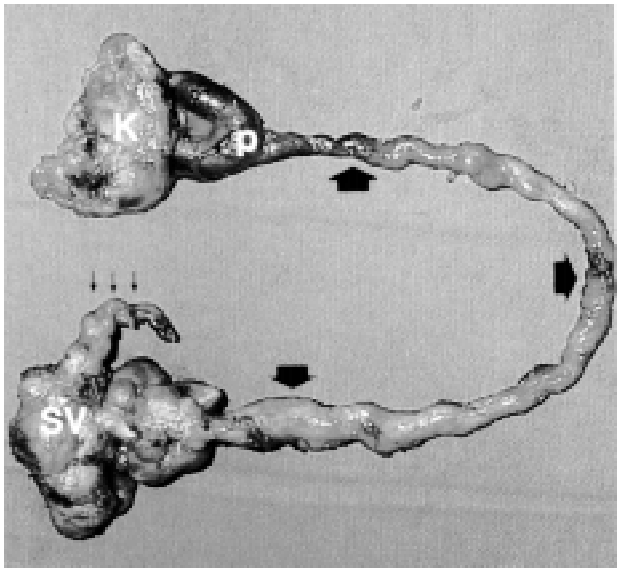

***Figure 3** - Surgical specimen containing the left dysplastic kidney (K) with renal pelvis (p), ureter (large arrows), seminal vesicle (SV), and vas deferens (short arrows).*

DISCUSSION

Congenital cysts of the seminal vesicles are rare entities, and two-thirds are associated with renal dysplasia or agenesis, and ectopic ureter. The close relationship between urinary and reproductive systems embryology responds for this condition. During the 4th week of pregnancy the ureter arises from the mesonephric duct and, due to a different growth between the mesonephric duct and the urogenital sinus, reaches a more cranial position, opening into the bladder. Seminal vesicles sprout from the distal mesonephric duct at week 12 of pregnancy. When the ureteral bud originates in a more cranial site it will not open into the bladder, resulting in an ectopic ureter, placed in one of the structures originated from the mesonephric duct (seminal vesicles, ejaculatory duct, or vas deferens). Moreover, the inadequate stimulation of the metanephrogenic blastema results in renal agenesis or dysplasia (1-3).

The diagnosis of a seminal vesicle cyst is generally made in adulthood, and most common symptoms include bladder irritation, post-coital pain, and hematospermia. Treatment is indicated for symptomatic cases. Transrectal cyst aspiration and open surgery are related to recurrence and elevated morbidity, respectively. Recently, Cherullo et al. (1) reported on 2 seminal vesicle cysts treated successfully through laparoscopic approach.

In this case, laparoscopy provided an excellent visualization of the retrovesical space, allowing effective resection of the seminal vesicle, ureter, and

renal remnant, and with minimal blood loss and low morbidity. We believe that laparoscopic approach is the treatment of choice for such cases.

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Correspondence address:
Dr. Henrique Rodrigues
Rua Djalma Ulrich, 329 / 301
Rio de Janeiro, RJ, 22071-020, Brazil
Fax: + 55 21 2579-2358
E-mail: hcrodrigues@uol.com.br