

Unilateral seminal vesicle agenesis and associated abnormalities

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Section: Uroradiology & genital male imaging

Imaging Technique: Ultrasound

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Case Type: Clinical Cases

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Patient: 41 years, male

Clinical History:

He had nonspecific abdominal discomfort.

Imaging Findings:

41-year-old-man was consulted for unspecific discomfort. Physical examination was normal. On ultrasound (US) control, the crossed ectopia of left kidney was detected and left seminal vesicle was absent (Figure 1). By transrectal route, agenesis of left seminal vesicle was confirmed. In addition, the cysts of left epididymis and left testis were found on scrotal US examination (Figure 2). The crossed ectopia of left kidney was definitely seen on intravenous pyelography (Figure 3). Left ureter was inserted into bladder in normal position. The patient was fertile. Left vas deferens was palpated on physical examination. His previous history was normal.

Discussion:

Unilateral agenesis of the seminal vesicles is thought to result from an embryologic insult before separation of the ureteral bud from the mesonephric duct, which typically occurs at 7 weeks' gestation. It is believed that if the insult occurs after 7 weeks' gestation, the seminal vesicle anomaly may not be associated with renal agenesis. The frequency of associated renal anomalies varies, 79% of patients with absence of a seminal vesicle or vas deferens had ipsilateral renal agenesis, 12% had ipsilateral renal abnormalities, and only 9% had normal kidneys bilaterally (1). Naturally, fertile men have not been checked up for urogenital abnormalities so that it is not possible precisely to detect the incidence of seminal vesicle agenesis in fertile males. Therefore, mostly infertile men had been searched to find the cause(s) in the literature. For example, Dominquez et al (2) investigated the incidence of seminal vesicle agenesis and its association with ductus deferens agenesis in 141 infertile males. They found 10 patients presented seminal vesicle agenesis (8 unilateral and 2 bilateral). They emphasized the importance of the anomalies as a cause of infertility and the association with other genitourinary anomalies. Previously invasive diagnostic methods (vasography, retrograde seminal vesiculography, etc.) were commonly used in order to detect any urogenital abnormality in infertile males. But, recently US and computed tomography (CT) have replaced them. Ultrasound, especially transrectal route, has become crucial in the assessment of infertility. Similar to our case, Luque (3) reported on a case of unilateral seminal vesicle agenesis in a patient with children. The author mentioned that a review of the scant literature available on this condition reflected how uncommon it was particularly in fertile subjects. Pellice et al (4) presented an interesting case with deferens unilateral agenesis associated to absence of epididymis, seminal vesicle and renal unit on the same side. More rarely, the urogenital malformations may be associated with vertebral or anorectal anomalies.

Differential Diagnosis List: Unilateral seminal vesicle agenesis and associated abnormalities

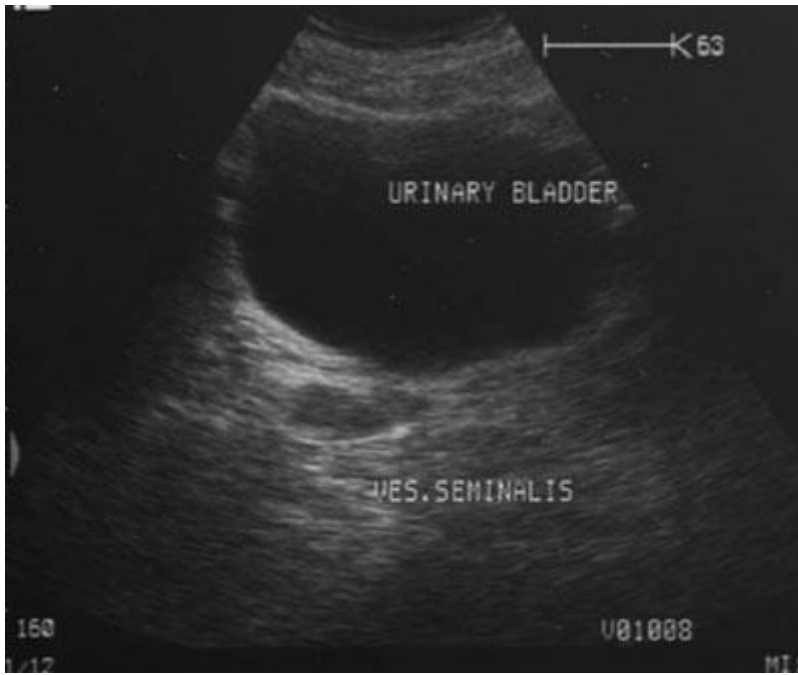
Final Diagnosis: Unilateral seminal vesicle agenesis and associated abnormalities

References:

- Williams RD, Sandlow JI. Surgery of the seminal vesicle. In: Walsch PC, Retik AB, Vaughan EDJr, Wein AJ editors. Campbell's Urology, 7nd ed. Vol.III. Philadelphia: WB Saunders, 1998: 3299-307.
- Dominquez C, Boronat F, Cunat E, et al. Agenesis of seminal vesicles in infertile males: ultrasonic diagnosis. Eur Urol 1991; 20:129-32. (PMID: [1752269](#))
- Luque Arana JI. Seminal vesicle agenesis, non-invasive diagnosis. Presentation of a case and review of the literature. Arch Esp Urol 1989; 42:705-6. (PMID: [2490361](#))
- Pellice VC, Pares PME, Bassa MP. Deferens unilateral agenesis associated with an absence of the epididymis, seminal vesicle and renal unit on the same side. A brief case. Actas Urol Esp 1998; 22:454-7. (PMID: [9675931](#))

Figure 1

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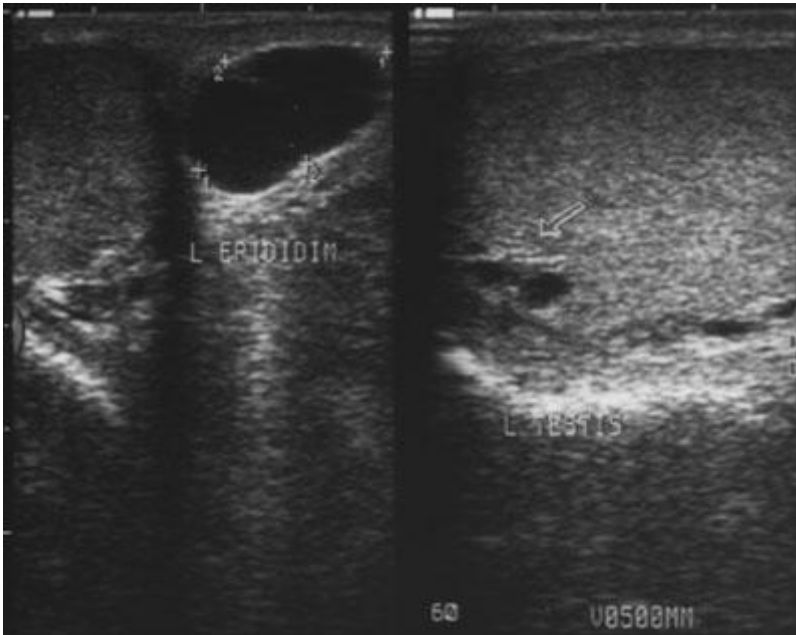


Description: On transabdominal ultrasound, left seminal vesicle was absent. Right vesicle was normal.

Origin:

Figure 2

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Description: With scrotal ultrasound, a cyst of caput epididymis and two small cysts of left testis were detected. **Origin:**

Figure 3

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Description: The crossed ectopia of left kidney was clearly seen on intravenous pyelogram. **Origin:**