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# Renal Aplastic Dysplasia and Ipsilateral Ectopic Ureter Obstructing the Seminal Via: A Possible Cause of Male Infertility: Part 2

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### 1. Discussion

Male pelvic cystic malformations may result from a too cranially sprouting of the ureteral bud with delayed absorption and ectopic opening of the distal end of the ureter [1–3]. These malformations are mostly diagnosed in patients within the second and fourth decades of life correlating to the beginning of sexual activity [3].

Symptoms are prevalently related to bladder or cyst distention or secondary to obstruction of mesonephric duct derivations. Only a few patients are asymptomatic (10%) [2–4]. Mayersak subdivides the pelvic cystic masses into midline and not midline cysts [5]. Differential diagnosis should consider all cystic pelvic masses. Müllerian cysts are located in the midline, as seminal vesicle cysts [2]. Considering its embryologic origin, a duct cyst should not contain sperm [5].

Few cases of unilateral renal agenesis associated with ipsilateral seminal vesicle ectasia or cyst have been reported in the literature [5]. MacDonald reported dysplastic kidney with ureter ending ectopically in the ipsilateral seminal vesicle in patients with a boggy mass above the prostate on rectal examination, symptoms of lower urinary tract infection, and non-visualisation of the ipsilateral kidney at the intravenous pyelography (IVP) [6].

Other lesions reported in the literature that may mimic a seminal vesicle cyst could be malignant masses of the rectum involving the bladder, leiomyoma of the bladder wall with degenerative changes, or an abscess from a colon diverticulum [7,8].

Clinical history and physical examination should be mandatory as the first diagnostic step. Abdominal ultrasound (US) and transrectal ultrasound (TRUS) may reveal any alteration of the kidney and the presence of a retrovesical cystic structure [2]. Carmignani reported that cystoscopy may show a distinct bulging of the interested hemitrigone and the absence of ureteral meatus [9]. US-guided puncture of the cystic mass allows for draining and examining the liquid content to confirm the presence or not of spermatozoa and to inject contrast medium to obtain further radiologic details of the cystic mass due to complex malformation cause [5,9].

DOI of original article: 10.1016/j.eururo.2007.02.013



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Several studies proposed also the use of vasovesiculography or computed tomography to make a differential diagnosis between different cystic malformations in the pelvis [3,10,11].

In the two cases examined the algorithm clinical/ physical assessment  $\rightarrow$  TRUS  $\rightarrow$  magnetic resonance imaging (MRI) achieved the correct diagnosis.

The malformations observed were characterised by a dysplastic pseudocystic ectopic ureter inserting into seminal via responsible for excretory azoospermia. TRUS confirmed its value as the first step in approaching these patients, but the MRI allowed us to define precisely the malformation anatomy. MRI may be considered an excellent diagnostic tool for evaluating infertile patients with malformation of the seminal via.

#### **EU-ACME** question

Which statement regarding male pelvic cyst malformation is correct?

- A. Most of patients are asymptomatic.
- B. Male pelvic cystic malformations may result from a too cranially sprouting of the ureteral bud with delayed absorption and ectopic opening of the distal end of the ureter.
- C. Vasovesiculography represents the best diagnostic tool.
- D. Malformations are mostly diagnosed in elderly patients.

Correct answer: B

#### References

- Cascio S, Paran S, Puri P. Associated urological anomalies in children with unilateral renal agenesis. J Urol 1999;162(3 pt 2):1081–3.
- [2] Van den Ouden D, Blom JH, Bangma C, de Spiegeleer AH. Diagnosis and management of seminal vesicle cysts associated with ipsilateral renal agenesis: a pooled analysis of 52 cases. Eur Urol 1998;33:433–40.
- [3] Roehrborn CG, Schneider HJ, Rugendorff EW, Hamann W. Embryological and diagnostic aspects of seminal vesicle cysts associated with upper urinary tract malformation. J Urol 1986;135:1029–32.
- [4] Denes FT, Montellato NI, Lopes RN, Barbosa Filho CM, Cabral AD. Seminal vesicle cyst and ipsilateral renal agenesis. Urology 1986;28:313–5.
- [5] Mayersak JS. Urogenital sinus-ejaculatory duct cyst: a case report with a proposed clinical classification and review of the literature. J Urol 1989;142:1330–2.
- [6] MacDonald GR. The ectopic ureter in men. J Urol 1986; 135:1269–71.
- [7] Haggar AM, Alpern MB, Froelich JW. MR identification of seminal vesicles simulating a presacral mass after abdominal perineal resection. AJR Am J Roentgenol 1988;151: 519–20.
- [8] Asbell SO. CT scanning in the male genital tract and in recurrent rectal carcinoma: a review. J Comput Tomogr 1981;5:244–55.
- [9] Carmignani G, Gallucci M, Puppo P, De Stefani S, Simonato A, Maffezzini M. Video laparoscopic excision of a seminal vesicle cyst associated with ipsilateral renal agenesis. J Urol 1995;153:437–9.
- [10] Weyman PJ, McClennan BL. Computed tomography and US in the evaluation of mesonephric duct anomalies. Urol Radiol 1979;1:29–37.
- [11] Schwartz ML, Kenney PJ, Bueschen AJ. Computed tomographic diagnosis of ectopic ureter with seminal vesicle cyst. Urology 1988;31:55–6.