SEMENAL VESICLE CYST WITH ECTOPIC URETERAL INSERTION AND IPSILATERAL RENAL DYSPLASIA – AN UNEXPECTED DIAGNOSIS

Goran Štimac¹, Jordan Dimanovski¹, Borislav Spajić¹, Nenad Babić², Božo Krušlin¹ and Ognjen Kraus¹

¹University Department of Urology, ²University Department of Radiology, ³Ljudevit Jurak University Department of Pathology, Sestre milosrdnica University Hospital, Zagreb, Croatia

SUMMARY – An extremely rare case of seminal vesicle cyst associated with ipsilateral renal dysplasia and ectopic ureter is presented. A 36-year-old patient underwent nephroureterovesiculectomy. Considering the clinical and imaging profile of the patient, a diagnosis of ureterocele with megareter was initially suspected, but intraoperative findings and definitive pathological analysis of the specimen revealed right renal dysplasia with ectopic ureter opening into seminal vesicle cyst. The clinical and therapeutic peculiarities of this rare condition are presented and the literature on this topic is reviewed.

Key words: Urinary tract – surgery; Kidney – abnormalities; Seminal vesicles – abnormalities; Case report

Introduction

The association of seminal vesicle cysts and upper urinary tract malformations is uncommon, with less than 200 cases in the literature¹, and it is even rarer when combined with ectopic ureter and renal dysplasia²⁴. An unexpected case of a right seminal vesicle cyst associated with ectopic ureter, and dysplastic renal tissue that had initially presented as ureterocele with megareter is reported to draw attention of urologists and radiologists to this rare entity and to describe the clinical and therapeutic aspects of the disease.

Case Report

A 36-year-old man presented with symptoms of bladder irritation and a history of right groin pain. There was no history of fever, hematuria or hematospermia. On physical examination, both testes were normal. Laboratory data including urinalysis and culture were unremarkable. Kidney and bladder ultrasonography revealed absence of the right kidney and a hypoechoic intravesical cystic mass at the right lateral base of the bladder (Fig. 1a). Excretory urography showed a solitary left kidney with a normal collecting system and a large, smooth filling defect in the right bladder base resembling ureterocele (Fig. 1b). The diagnosis of ureterocele was also suspected on cystoscopy with considerable elevation of the right hemitrigone by a large, cystic mass. Magnetic resonance imaging (MRI) of the abdomen and pelvis was performed to locate the right kidney and also for better characterization of the cyst. Pelvic MRI showed a large cystic lesion, which measured 7.0 cm in diameter, arising in the region of the right seminal vesicle, and a tortuous ureter-like tube entering the small kidney in the lower lumbar region (Fig. 1c). The mass showed low T1-weighted and high T2-weighted signal intensity compatible with increased protein concentration. The mass was considered to be ectopic, atrophic kidney with megareter and ureterocele. The patient underwent nephroureterovesiculectomy. The whole specimen was dissected and removed together with the right ureter, kidney remnant and the seminal vesicle transvesically. Pathological analysis of the specimen disclosed a small kidney remnant with fetal characteristics and ureter-like
tube ectopic into large seminal vesicle cyst (Fig. 2). Definitive diagnosis was seminal vesicle cyst with ectopic ureteral insertion and ipsilateral renal dysplasia. The patient did well postoperatively, and his symptoms completely resolved.

**Discussion**

Congenital or acquired seminal vesicle cysts involve less than 0.005% of the population. Congenital cysts associated with ipsilateral malformation of the upper urinary tract were first described by Zinner in 1914. While seminal vesicle cysts may infrequently have an acquired origin, probably related to an obstruction in the ejaculatory duct, the vast majority of them are congenital and result from a developmental anomaly in the Wolffian duct. Approximately two thirds of seminal vesicle cysts are associated with ipsilateral renal agenesis or dysplasia. In the absence of associated renal anomalies, differentiation between congenital and acquired vesical cysts is not possible.

Ipsilateral renal dysplasia and cyst of the seminal vesicle are associated due to the common origin of the ureteral bud and seminal vesicle from the mesonephric (Wolffian) duct. If an insult occurs approximately at the 12th gestational week, the embryogenesis of the kidney,
Treatment of seminal vesicle cysts is reserved for symptomatic cases and can be managed by surgical excision, transurethral derooing, transvesical drainage, needle aspiration or laparoscopic approach\(^6\). Operative treatment of more complex anomalies involves en bloc excision of the seminal vesicle cyst, ipsilateral ureter and dysplastic renal tissue, as in our case.

References


Fig. 2. The gross resected specimen containing a cystic mass of the left seminal vesicle (asterisk) with ectopic ureteral insertion and kidney remnant (arrow).
Sažetak

CISTA SJEMENOG MJEHURIĆA S EKTOPIČNIM PRIPOJEM MOKRAČOVODA I ISTOSTRANOM BUBREŽNOM DISPLAZIJOM – NEOČEKIVANA DIJAGNOZA

G. Štimac, J. Dumanovski, B. Spajić, N. Babić, B. Kruliš i O. Kraus

Prikazan je vrlo rijedak slučaj bolesnika s cistom sjemenog mjehurića udruženom s istostranom bubrežnom displazijom i ektopičnim mokračovodom. U 36-godišnjeg bolesnika učinjena je nefroureterovezikulektomija. Inicijalna dijagnoza temeljena na kliničkim i radiološkim podacima govorila je u prilog ureterokele s megaureterom, no intraoperacijski nalazi i definitivna patohistološka analiza uzorka razotkrili su ektopiju mokračovoda u cistu sjemenog mjehurića. Prikazane su kliničke, dijagnostičke i terapijske osobitosti ove rijetke anomalije. Iznosjen je i pregled relevantne literature.

Ključne riječi: Genitale bolesti, muški – kirurgija; Babreg – nenormalnosti; Sjemeni vezikule – nenormalnost; Prikaz slučaja