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Case Report

Zinner syndrome presenting with intermittent scrotal pain in a young man

Sofia Florim[a,*], *Vitor Oliveira*[b], *Diogo Rocha*[a]

[a] *Department of Radiology, Centro Hospitalar de Vila Nova de Gaia, Rua Conceição Fernandes, 1079, 4400 Vila Nova de Gaia, Portugal*

[b] *Department of Urology, Centro Hospitalar de Vila Nova de Gaia, Rua Conceição Fernandes, 1079, 4400 Vila Nova de Gaia, Portugal*

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ABSTRACT

Congenital malformations of the seminal vesicle are uncommon, and most of them are cystic malformations. If an insult occurs during the first trimester of gestation, the embryogenesis of the kidney, ureter, seminal vesicle, and vas deferens could be altered. The mutual embryological origins of the seminal vesicle and ureteral bud from the mesonephric (Wolffian) duct result in association between ipsilateral renal agenesis and seminal vesical cysts. Zinner syndrome is a rare condition comprising a triad of unilateral renal agenesis, ipsilateral seminal vesicle obstruction and ipsilateral ejaculatory duct obstruction. This syndrome were first described by Zinner in 1914, and 200 cases have been reported in the literature. Most patients with this anomaly are asymptomatic until the second or third decade of life. Some cases have nonspecific symptoms such as prostatism, urinary urgency, dysuria, painful ejaculation, and perineal discomfort. In this paper, we present a uncommon case of a 21-year-old patient which the initial presentation of this condition was intermittent scrotal pain. A brief review of the literature is undertaken, regarding the main clinical, imaging implications, and the developmental anomalies that are involved in this congenital anomaly.

Introduction

Congenital malformations of the seminal vesicle are uncommon, and most of them are cystic malformations. If an insult occurs during the first trimester of gestation, the embryogenesis of the kidney, ureter, seminal vesicle, and vas deferens could be altered.

The mutual embryological origins of the seminal vesicle and ureteral bud from the mesonephric (Wolffian) duct result in association between ipsilateral renal agenesis and seminal vesical cysts.

Zinner syndrome is a rare condition comprising a triad of unilateral renal agenesis, ipsilateral seminal vesicle obstruction and ipsilateral ejaculatory duct obstruction.

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* Corresponding author.
E-mail address: Sofiaflorim@gmail.com (S. Florim).

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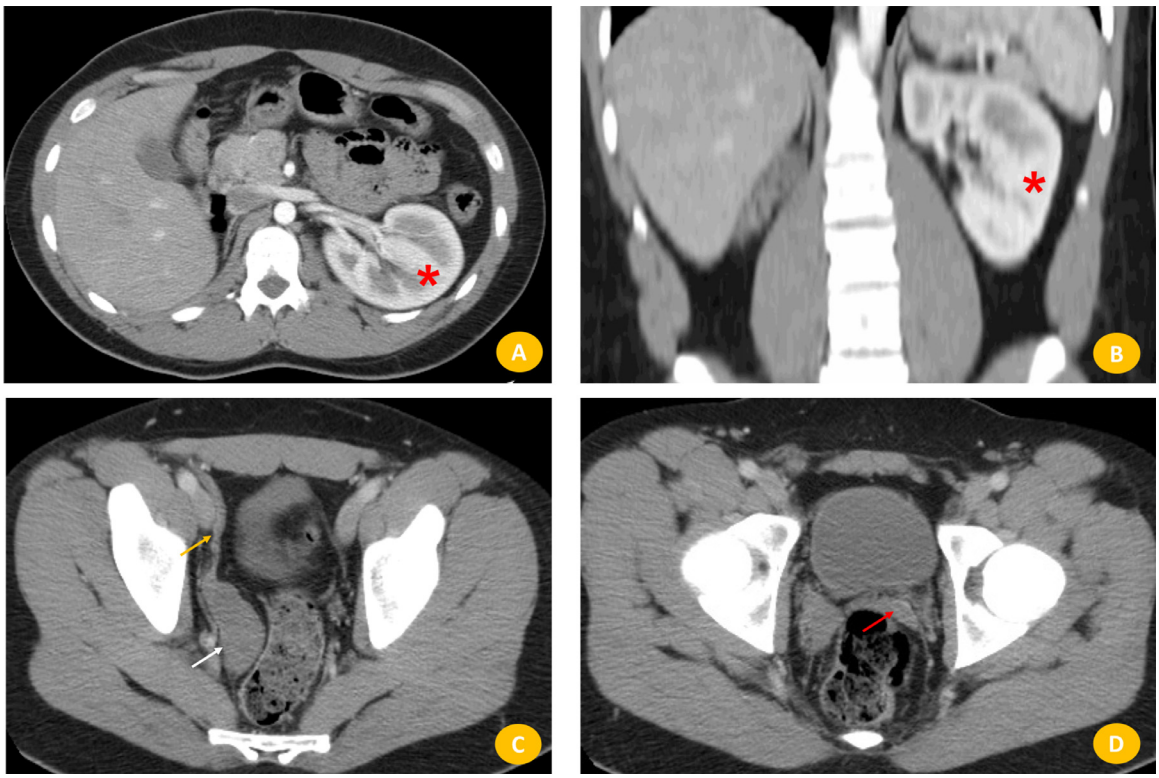

Fig. 1 – Abdominopelvic computerized tomography. (A and B) Axial and coronal CT-enhanced phase, reveal vicariant left kidney (*) and right kidney fossa empty. (C and D) Axial CT-enhanced phases reveal, seminal vesical asymmetric, right seminal vesicle is enlarged (white arrow) and efferent duct (orange arrow). Left seminal vesicle is normal morphology (red arrow). (Color version of figure is available online.)

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In this paper, we present an uncommon case of a 21-year-old patient which the initial presentation of this condition was intermittent scrotal pain.

A brief review of the literature is undertaken, regarding the main clinical, imaging implications, and the developmental anomalies that are involved in this congenital anomaly.

Case report

A 21-year-old male was referred to urology department for repetitive episodes of intermittent scrotal pain during 4 months. He denied trauma, hemospermia, or hematuria.

Physical exploration was normal, revealing just a little thickening of right spermatic cord. Laboratory evaluation was normal. Luteinizing hormone, follicle-stimulating hormone, total, and free testosterone were also unchanged.

He brought a computerized tomography (CT) imaging from outside which revealed a homogeneous liquid mass with polylobed contours not taking contrast in retrovesical seat (Fig. 1), molding the posterior surface of the bladder, measuring 80 × 60 mm. The right kidney was absent, and the left vicariant kidney was shown. There is no lymphadenopathy iliac or pelvic effusion.

To better characterize anatomic relationships of the seminal vesicle cyst the patient was submitted to a magnetic resonance imaging (MRI) scan which confirmed cystic–tubular retrovesical structures with T1 and T2 hyperintense content, and a fluid level suggesting proteinaceous or hematic content.

Knowing the influence of such syndrome in the fertility status, the patient was asked to undergo a semen analysis which was normal.

As patient was not planning to have children for the moment, so we kept him in a follow-up program, until the developing of complaints or clinical infertility. He was consulted 6 months after the treatment and remained asymptomatic.

Background

Seminal vesicle cysts were first identified in 1872 by Smith, while the association between renal unilateral agenesis and homolateral seminal vesicle cyst was described by Zinner only in 1914.

This syndrome comprises the triad of ipsilateral renal agenesis, cystic seminal vesicle, and ejaculator channel obstruction [1]. 200 cases of seminal vesicle cysts associated with