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Case Report

A Rare Case of Zinner Syndrome and Grade 3 Varicocele

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Background:
Zinner syndrome is an uncommon congenital disorder characterized by a triad of unilateral renal agenesis, ejaculatory duct obstruction, and ipsilateral seminal vesicle cyst. In this case, we presented a 27-year-old patient with left scrotal discomfort and varicocele grade 3 and Zinner syndrome and oligospermia who underwent inguinal varicocelectomy and the patient improved semen analysis and symptoms.

Keywords: Zinner syndrome, Seminal vesicle cyst, Renal agenesis, Oligospermia, Varicocele

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Introduction

Zinner syndrome (ZS) is an uncommon congenital anomaly that exclusively affects males. The condition is characterized by a triad of anomalies: unilateral renal agenesis, ipsilateral seminal vesicle cyst, and ejaculatory tract atresia (1). We present a case of a 27-year-old man with scrotal discomfort and varicocele in the physical examination and oligospermia and find Zinner syndrome in ultrasonography underwent inguinal varicocelectomy.

Case presentation

A 27-year-old man was admitted from the urology clinic with left scrotal discomfort, he had regular sex activity and no difficulties related to libido or potency. He has no history of tobacco use or alcohol consumption. Past medical record is unremarkable physical examination shows normal abdominal examination. In the genital examination, the penis was circumcised, and palpitated cystic component in the left epididymis and grade 3 varicocele, both testes had normal size. Ultrasonography shows ectasia in the left rete testis in favor of vas defrans obstruction and varicocele grade 4 ultrasonography of abdominopelvic revealed agenesis of the left kidney and cyst in the left posterior of the bladder. Transrectal ultrasonography revealed cyst in left seminal vesicle (42*31 mm) stenosis in ejaculatory duct (maximum diameter of ejaculatory duct about 7.6 mm) **Figure 1-3**. Basic semen analysis shows normal color and viscosity a semen volume of 2 ml and a sperm count of 1.28 million/ml. Basic laboratory investigations are normal. The patient underwent inguinal varicocelectomy vas deferens are atrophic during surgery. A year after surgery patient's symptoms improved and semen analysis showed normal color and viscosity a semen volume of 2.5 ml and a sperm count of about 29.8 million/ml.

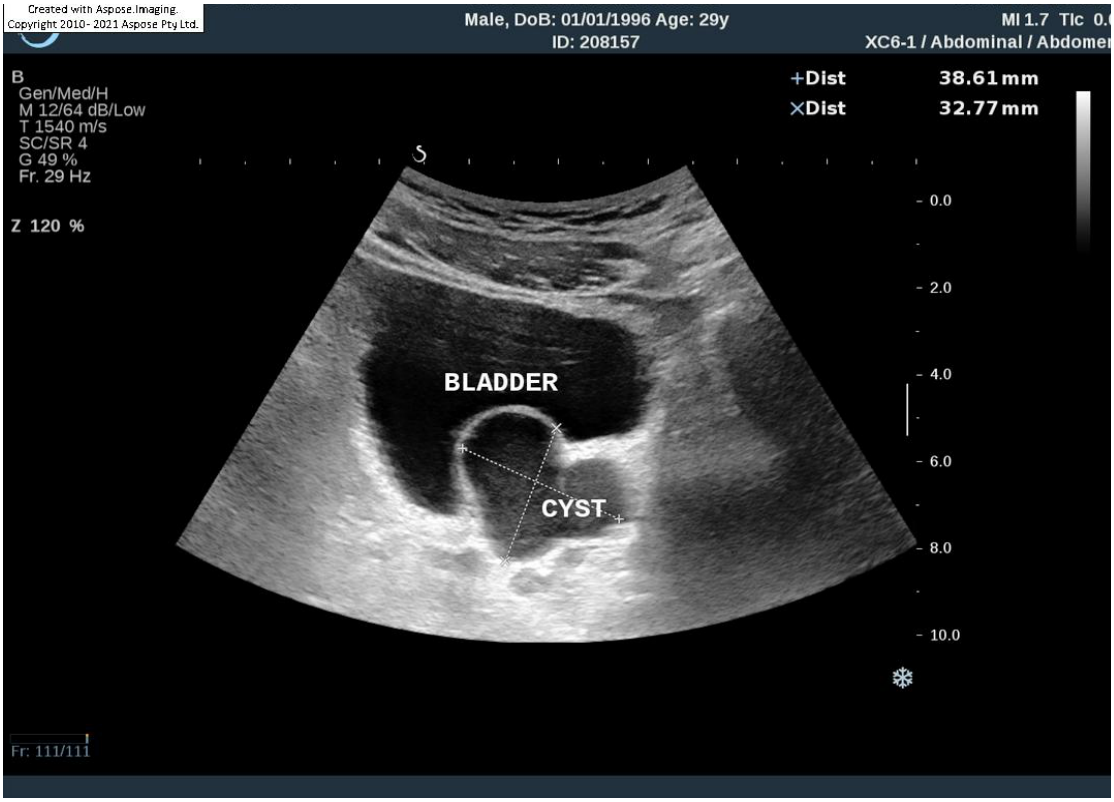

Fig 1. Ultrasonography of cyst.

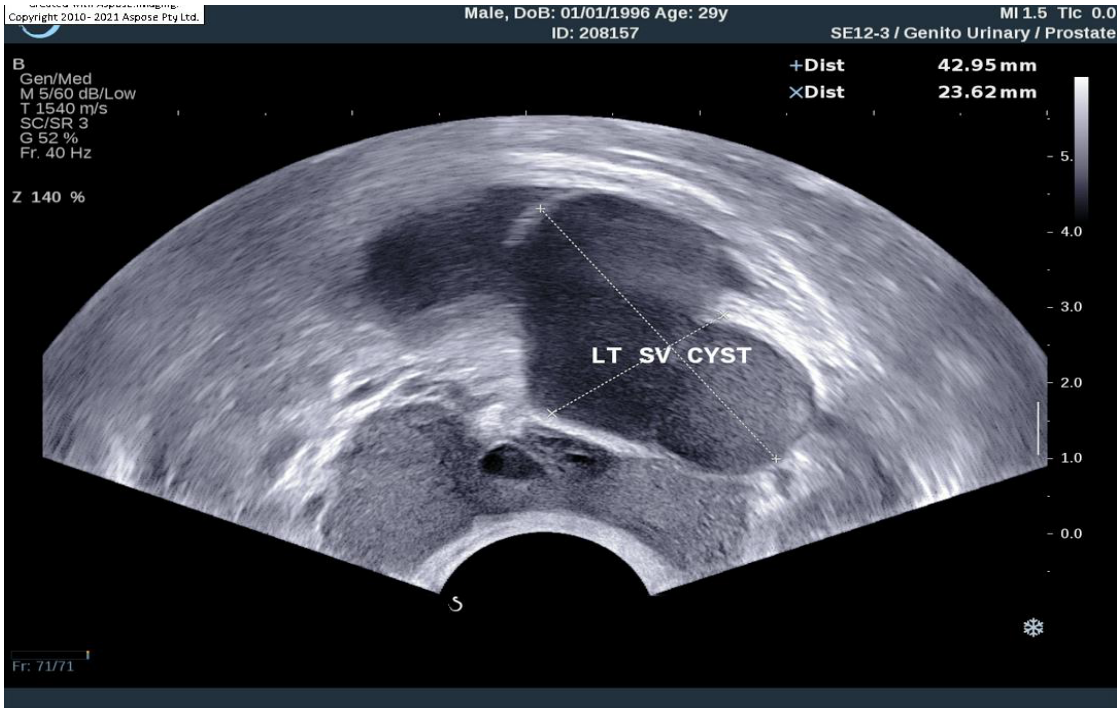

Fig 2. Ultrasonography of cyst.

Fig 3. Bladder cyst.

Discussion

We recorded a Zinner syndrome case, a rare congenital genitourinary anomaly initially described in 1914 (2). The incidence of this condition in newborns is approximately 0.00214% (3). The shared embryological origin of the genital and renal systems elucidates the correlation between ipsilateral renal agenesis and ipsilateral seminal vesicle cyst in Zinner syndrome. It is believed to be associated with an in-utero insult leading to the maldevelopment of the distal Wolffian duct. Zinner syndrome presents a variety of symptoms, including testicular pain, infertility, urinary irritation, nocturia, scrotal swelling, fever, dysuria, and hematuria (4, 5). The diagnosis is founded on imaging that demonstrated ipsilateral renal agenesis and cystic dilation of the seminal vesicle (6). The management of Zinner syndrome is contingent upon clinical presentation (7). We, in the current paper, presented a 27-year-old patient experiencing left scrotal discomfort and varicocele grade 3 and Zinner syndrome and oligospermia who underwent inguinal varicocelectomy and the patient improved semen analysis and symptoms. Zinner syndrome is one of the cause infertilities in males (8). If both testes have normal size on physical examination, varicocelectomy can help patient to improve semen.

Conclusion

In this case, indication of varicocelectomy is scrotal discomfort in Zinner syndrome, had ejaculatory tract atresia but against to our expectation, semen fluid analysis improved. In this situation, (Zinner syndrome and varicocele) perform varicocelectomy help patient for infertility plan management.

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Conflict of interest

The authors reported no conflicts of interest.

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