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Case Report

A rare cause of epididymo-orchitis

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ABSTRACT

Epididymo-orchitis is an inflammatory lesion of the testis and epididymis with a lymphocytic exudate. Patients with acute epididymo-orchitis typically present with scrotal pain, swelling, tenderness and fever. Here, we present a patient with scrotal pain and hemiscrotal swelling as the main complaints; however further investigations revealed a completely different and rare diagnosis. Zinner's syndrome is a very rare developmental anomaly of the Wolffian duct. To date, only about 200 cases have been diagnosed. It is a triad of unilateral renal agenesis, ipsilateral seminal vesicle cyst and ejaculatory duct obstruction. Some patients remain asymptomatic and discovered incidentally, while others present with symptoms related to seminal vesicle cysts or ejaculatory duct obstruction: voiding or ejaculatory difficulty or pain. Treatment options include transurethral or transrectal aspiration and percutaneous drainage, however both are linked to an increased risk of recurrence. Symptomatic, complicated and recurrent cyst will require excision of the cyst, either laparoscopically or robotically.

Keywords: Epididymo-orchitis, Orchitis, Zinner syndrome

INTRODUCTION

Epididymo-orchitis is an inflammatory lesion of the testis and epididymis with a lymphocytic exudate.[1] Patients with acute epididymo-orchitis typically present with scrotal pain, swelling, tenderness and fever. Chronic inflammatory conditions of the testes can disrupt the process of spermatogenesis and alter both sperm number and quality.[2] Here, we present a patient with scrotal pain and hemiscrotal swelling as the main complaints.

CASE REPORT

A male patient in his late twenties came with complaints of left side scrotal pain since 15-20 days and dysuria since 3 days. It was associated with left hemiscrotal swelling. Patient is unmarried at present. General physical examination was normal. Per abdomen examination did not reveal any significant findings. External urethral meatus was slightly narrow. Left testes was tender and bulky. Left epididymis felt enlarged and hardened. B/L spermatic cord normal.

Management

Complete hemogram, urine routine, biochemical tests were all within normal limits. Ultrasonography of abdomen (Figure 1) revealed left renal agenesis/ severely atrophic left kidney; tortuous tubular structure on left side of urinary bladder with distal end abutting the prostate-dilated ureter/dilated bowel loop/abscess; Ultrasonography of scrotum showed left epididymo-orchitis and mild left hydrocele. Hence, we proceeded with contrast enhanced computed tomography (CECT) scan of kidney ureter bladder (KUB) (Figures 2 and 3). CECT scan of KUB region revealed tubular/cystic lesion in the region of the left seminal vesicle extending along the left ejaculatory duct associated with agenesis of the left kidney. Contrast enhanced magnetic resonance imaging (MRI) abdomen+pelvis (Figure 4) showed left renal

agenesis with left seminal vesicle cyst. These are the features of Zinner's syndrome. The patient was managed conservatively for epididymo-orchitis, with intravenous ceftriaxone 500 mg and oral doxycycline 100 mg and intravenous analgesics. As the patient is unmarried at present, we have kept him on regular follow up, until he develops complaints or clinical infertility. At regular 6 monthly follow up, patient is asymptomatic.

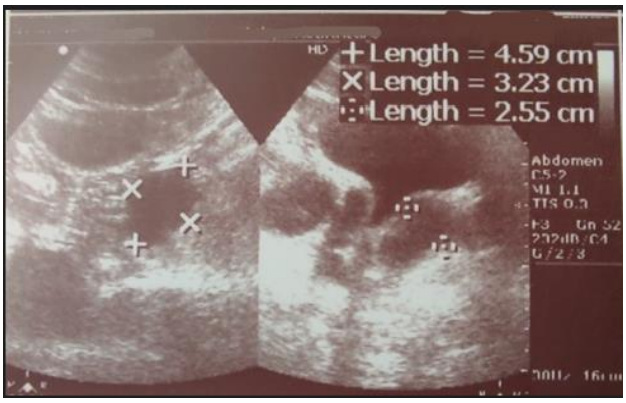

Figure 1: Ultrasound of KUB showing a tubular structure on the left side of the bladder; abutting the prostate.

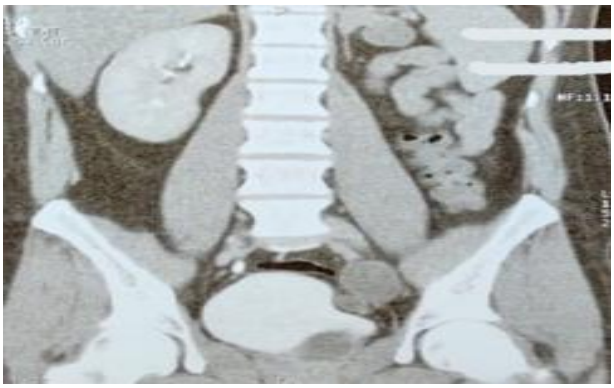

Figure 2: Coronal CT KUB images showing left renal agenesis with a seminal vesical cyst.

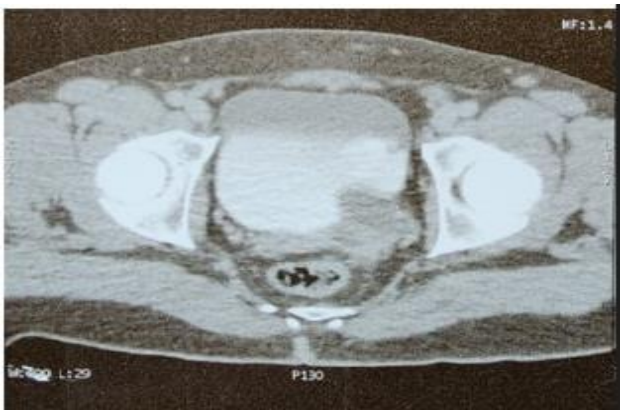

Figure 3: CT KUB showing a cystic lesion near the urinary bladder.

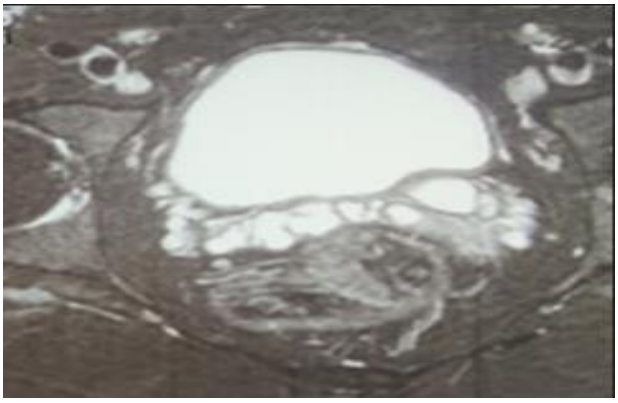

Figure 4: MRI contrast confirming a seminal vesicle cyst.

DISCUSSION

Zinner's syndrome is a triad of Wolffian duct abnormality comprising of unilateral renal agenesis, ipsilateral seminal vesicle cyst, and ejaculatory duct obstruction.[3] Ipsilateral renal agenesis may be associated with seminal vesicle cysts in 70% of cases.[4] Some patients remain asymptomatic and discovered incidentally, others present with symptoms related to seminal vesicle cysts or ejaculatory duct obstruction: voiding or ejaculatory difficulty or pain.[4] The diagnosis is made with imaging findings. It is often diagnosed in the second and third decades of life and can lead to serious complications, particularly infertility.[5]

Congenital malformations of the seminal vesicle are uncommon, and most of them are cystic malformations.[6] The embryogenesis of the kidney, ureter, seminal vesicle, and vas deferens could be altered, if an insult occurs during the first trimester of gestation.[6] Zinner's syndrome was first described in 1914 by Zinner. Zinner's syndrome remains a rare congenital malformation with only 200 cases reported in the available literature.[7] Symptoms reported in the literature are usually related either to micturition which includes dysuria, obstructive urination, frequency, urgency, and hematuria; to perineal, scrotal, hypogastric, or defecation pain; or in some cases to ejaculatory disorders such as pain following ejaculation, infertility, and hematospermia.[5]

Pathogenesis of infertility is unclear; but it is likely due to the associated ejaculatory duct obstruction.[5] Semen analysis can show a low ejaculatory volume, azoospermia, alkaline pH, low concentration of carnitine and fructose, and high citrate level. MRI is the gold standard investigation for diagnosis of Zinner's syndrome.[5] Once diagnosed, treatment of the seminal vesicle cyst depends on the size of the cyst and symptomatology. Asymptomatic cysts are usually treated with alpha-blockers. Surgical treatment should be indicated only in patients with symptoms, in case of failure of previous therapy, or when the size of the cyst is greater than 5 cm. To date, there are no official guidelines for the treatment

of Zinner syndrome.[8] Symptomatic cases will require excision of the cyst, either laparoscopically or robotically. Complete excision of the seminal vesicle cyst is the only 100% effective treatment option for symptomatic patients with Zinner syndrome.[9] Conventional laproscopy's advantages are further enhanced by the robot assisted approach.

To improve our understanding of the reproductive result for individuals with Zinner syndrome and to provide appropriate follow-up and therapy, updated studies including all known cases and examining the fertility status in those patients are needed.

CONCLUSION

Seminal vesicle cysts combined with ipsilateral renal agenesis are a rare anomaly in the development of the urogenital system. These usually occur in males between the second to fourth decades. Zinner's syndrome is an uncommon cause of dysuria in men; its diagnosis is based on imaging techniques. Ultrasonography is a noninvasive exam and could provide valuable information, CT scan could be sufficient to make the diagnosis if it defined the origin of the pelvic mass, and MRI is the investigation of choice for a precise lesional statement and successful therapeutic management.

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