CASE REPORT

A Rare Case of Zinner's Syndrome

Anil K Shukla[1], Ajit K Reddy[2]

Abstract

Introduction: Seminal vesicle cyst is very rare and is usually associated with ipsilateral renal agenesis. It was first reported by Zinner in 1914.

Method: A young boy of 17 years presented to us for computed tomography of abdomen and pelvis.

Observation and results: We found retrovesicular mass of near water density which was projecting above prostate. Patient did not have right kidney in normal or ectopic location. Our findings confirmed right renal agenesis and same side seminal vesicle cyst.

Conclusion: Zinner syndrome is very rare and is associated with infertility. Computed tomography of abdomen and pelvis with contrast is the modality of choice.

Keywords: Computed tomography, Renal agenesis, Seminal vesicle cyst.

The Journal of Medical Sciences (2019): 10.5005/jp-journals-10045-00106

Introduction

Various congenital anomalies of seminal vesicles can be seen like agenesis, fusion, duplication, hypoplasia, or ectopic location. Cyst is more common; however, diverticulum or fusion with the ureter is also seen. It can also have associated renal anomalies like agenesis of ipsilateral kidney. Our case shows the right-sided seminal vesicle cyst and right-sided absent kidney. It is one of the rare conditions known as Zinner's syndrome and we diagnosed it by contrast computed tomography (CT).[1–3]

Case Report

A young boy aged 17 years presented with slight discomfort after passing urine with incomplete emptying of bladder for the last few days. His clinical and biochemical tests were normal and he was referred to our department for CT.

On CT, a well-defined, retrovesicular mass of water to near-water attenuation, projecting upwards and above prostate was observed. The wall of the cyst was slightly thickened with slight enlargement of the same-sided seminal vesicle as compared to left side. In our patient, the diameter of the seminal vesicle cyst was 3.4 × 4.0 × 2.2 cm (Figs 1 to 3). In our case, the right-sided kidney was not seen in normal or ectopic locations, suggestive of agenesis. The left kidney was solitary, hypertrophic measuring 12 cm in the long axis, 6.0 cm in the transverse axis, and the parenchymal thickness was 2.2 cm. There was no evidence of calculus or hydronephrosis (Fig. 4). Biochemical renal parameters were maintained.

[1]Department of Radiodiagnosis, RajaRajeswari Medical College & Hospital, Mysore Road, Bengaluru, Karnataka, India

[2]Department of Radiodiagnosis, Kempegowda Institute of Medical Sciences, Bengaluru, Karnataka, India

Corresponding Author: Anil K Shukla, Department of Radiodiagnosis, RajaRajeswari Medical College & Hospital, Mysore Road, Bengaluru, Karnataka, India, Phone: +91 93425 08923, e-mail: shookla2007@yahoo.co.in

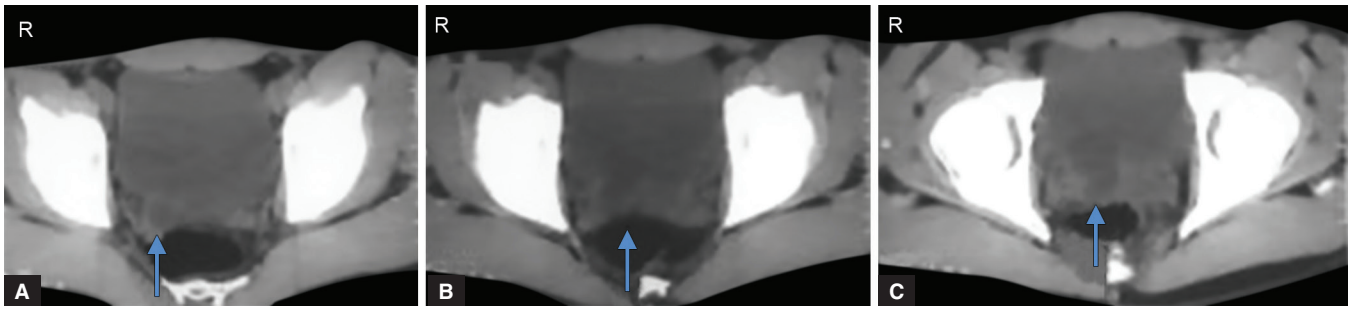
How to cite this article: Shukla AK, Reddy AK. A Rare Case of Zinner's Syndrome. J Med Sci 2019;5(1):20–22.

Source of support: Nil

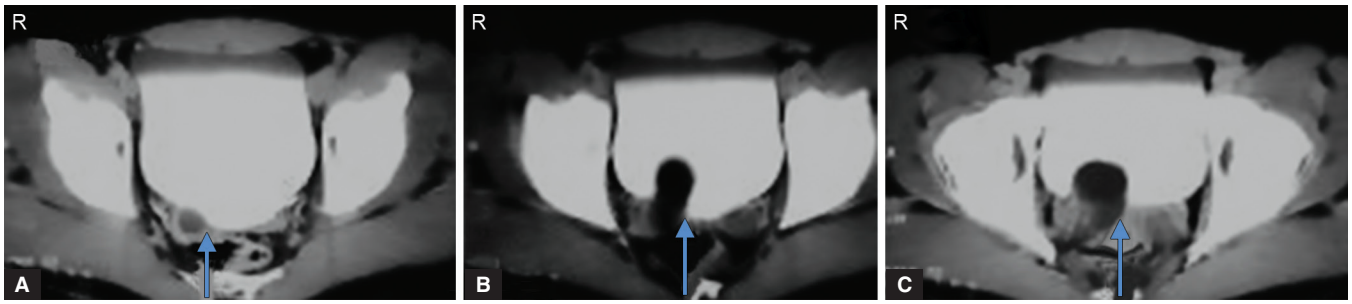
Conflict of interest: None

Discussion

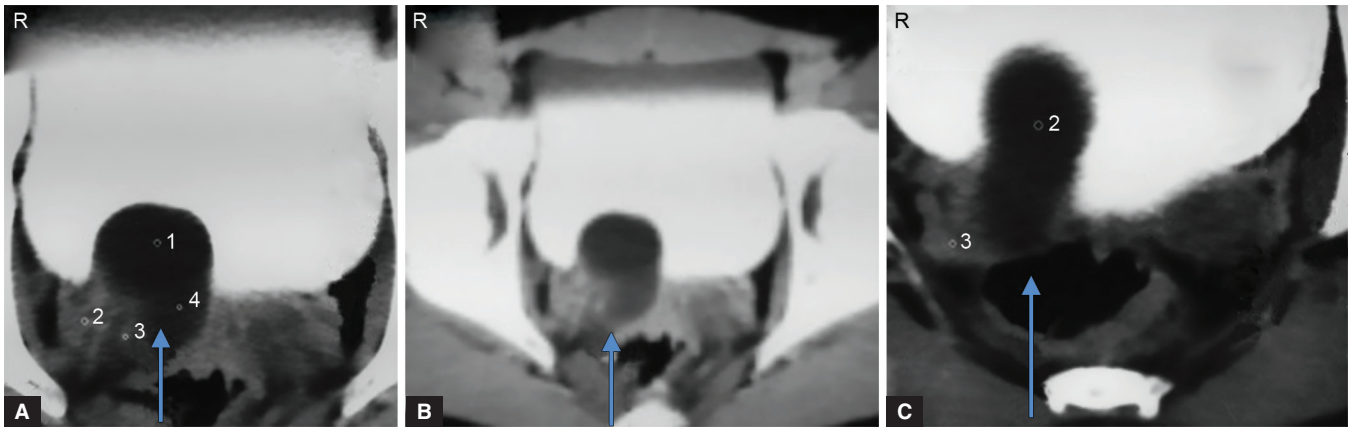
In 1914, Zinner for the first time reported the seminal vesicle cyst and its association with ipsilateral renal agenesis. It is less common; however, testicular ectopia or agenesis may be associated with this. It occurs in 0.005% of the population. Renal agenesis is congenital, and one sided is more common than both sided. The remaining kidney shows hypertrophy which was seen in our case. It is reported as incidental 0.99–1.8 per 1,000 autopsies. Solitary kidney in both sexes is associated with genital anomalies that were more common in females than males, and the M:F ratio is 1:3–5. The male infertility in 2% of cases is due to seminal vesicle abnormality and the cyst is much small. Renal agenesis may be unilateral or bilateral. During



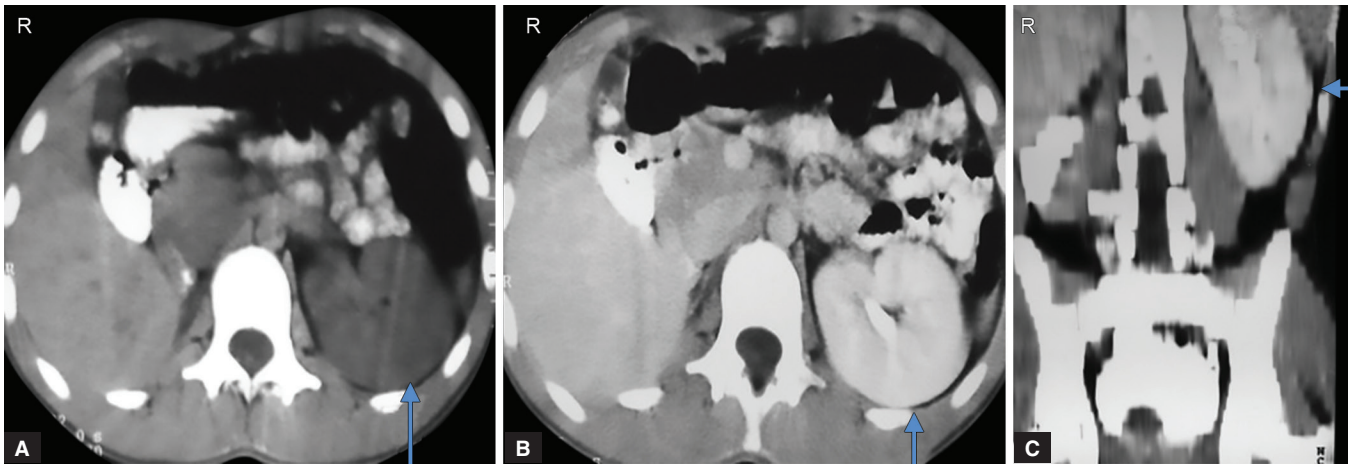
Figs 1A to C: Axial unenhanced CT of pelvis showing seminal vesicle cyst indenting urinary bladder (arrows)



Figs 2A to C: Axial contrast-enhanced computed tomography (CECT) of pelvis is showing right seminal vesicle cyst (arrows)



Figs 3A to C: CECT scan of the nonenhancing retrovesical mass (seminal vesicle cyst (SVC)) with no calcification, occupying mainly the right side of the pelvis, with extrinsic compression on the urinary bladder (arrows)



Figs 4A to C: CECT axial and coronal reconstructed images of the abdomen showing absent right kidney and slight hypertrophic left kidney (arrows)

fetal growth, abnormality is due to metanephric blastema, improper development of ureteral bud, or formation of the mesonephric duct.[4–6]

CT confirms the findings that the seminal vesicle cyst is associated with ipsilateral renal agenesis in 68% of the cases. Kidneys with this anomaly are dysplastic or absent. The mean age of the presentation is 30.2 years with a right-sided predominance.[7] Agenesis or rarely polycystic kidney can be seen in two or three decades of life. Other findings are urinary tract infection, prostatitis, epididymitis, hematuria, or bloody ejaculation. Seminal vesicle cysts can be differentiated with prostatic cyst, bladder diverticula, ureterocele, ejaculatory, or Mullerian ducts' cysts. If cysts are more than 5 cm, they become symptomatic, but in our case, the patient was asymptomatic.[1,8]

If the cysts are giant, i.e., more than 12 cm, they can exert pressure on the urinary bladder and rectum, requiring operative resection.[5,9] Our patient was not subjected to the surgery; however, majority of times laparoscopic surgical excision is recommended for the seminal vesicle cysts because they are rare and single.[3]

Conclusion

To conclude, seminal vesicle cyst with renal agenesis is a rare association and can cause lower urinary tract symptoms and infertility. CT is the imaging modality of choice for diagnosis.[10]

References

1. Arora SS, Breiman RS, et al. CT and MRI of congenital anomalies of the seminal vesicles. AJR Am J Roentgenol 2007;189: 130–135. DOI: 10.2214/AJR.06.1345.
2. Hong YK, Onal B, et al. Robot-assisted laparoscopic excision of symptomatic retrovesical cysts in boys and young adults. J Urol 2011;186:2372–2378. DOI: 10.1016/j.juro.2011.07.113.
3. Ploumidis A, Sooriakumaran P, et al. Wiklund robotic-assisted laparoscopic vesiculectomy for lower urinary tract obstruction by a large seminal vesicle cyst. Int J Surg Case Rep 2012;3:375–378. DOI: 10.1016/j.ijscr.2012.04.014.
4. Cherullo EE, Meraney AM, et al. Laparoscopic management of congenital seminal vesicle cysts associated with ipsilateral renal agenesis. J Urol 2002;167:1263–1267.
5. Carmack AJ, Siddiq FM, et al. Novel use of da Vinci robotic surgical system: removal of seminal vesicle cyst in previously dissected pelvis. Urology 2006;67(1):199–201. DOI: 10.1016/j.urology.2005.07.023.
6. Nikam V, Nagure P, et al. Unilateral left renal agenesis associated with congenital agenesis of Vas deferens and seminal vesicle: a case report. Int J Med Res Health Sci 2018;7(5):83–87.
7. Özkan MB, Bilgici MC, et al. Congenital seminal vesicle cyst accompanying with ipsilateral renal agenesis in an adolescent patient: Apediatric radiologist approach to Zinner's syndrome. Egypt J Radiol Nucl Med 2015;46:1159–1162.
8. Coşkun B, Dalkılıç A, et al. A case of seminal vesicle cyst associated with psilateral renal agenesis diagnosed during an investigation of urinary incontinence. Turk J Urol 2013;39(1):53–55. DOI: 10.5152/tud.2013.011.
9. Livingston L, Larsen CR. Seminal vesicle cyst with ipsilateral renal agenesis. AJR Am J Roentgenol 2000;175:177–180. DOI: 10.2214/ajr.175.1.1750177.
10. Satáa A, Rhouma SB, et al. Congenital seminal vesicle cyst associated with ipsilateral renal agenesis and cryptorchidism causing bladder outlet obstruction: a case report and review of the literature. UroToday Int J 2012;5(6):61–65.