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Research Article

CONGENITAL PROSTATIC CYSTS: A CASE SERIES

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A R T I C L E I N F O

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A B S T R A C T

Prostatic cyst is a rare congenital disease which can be attributed to a number of etiologies, that mainly include cysts arising from mullerian ducts and utricle remnants, ejaculatory duct diverticulum, prostatic retention cyst and Zinner's Syndrome. Zinner's Syndrome is a triad of mullerian ductabnormalities comprising of unilateral renal agenesis, ipsilateral seminal vesicle cyst, and ejaculatory ductobstruction. It is often considered to be the male equivalent of Meyer RokitanskyKustner Hauser (MRKH) syndrome in females.
Transrectalultrasound (TRUS) has been proved to be a good imaging modality for diagnosing cysts as it has high accuracy, is cheap, easily available, quick and has no radiation risk while Magnetic Resonance Imaging (MRI) is more effective in assessing ejaculatory duct and seminal vesicles due to its high resolution. Upon evaluation by TRUS and MRI, surgical intervention can be further planned according to patient symptomatology.
In this case series we report three patients who presented to our outpatient department on three different occasions. Two of these patients were diagnosed with Zinner's Syndrome and one patient was diagnosed with a midline prostatic cyst.

INTRODUCTION

Prostatic cyst is a rare congenital disease which can be attributed to a number of etiologies, that mainly include cysts arising from mullerian ducts and utricle remnants, ejaculatory duct diverticulum, prostatic retention cyst and Zinner's Syndrome.(1) Zinner's syndrome is a triad of mullerian ductabnormality comprising of unilateral renal agenesis, ipsilateral seminal vesicle cyst, and ejaculatory ductobstruction.(2) It is best diagnosed by TRUS and MRI, and surgical intervention is planned according to patient symptomatology. This case series incorporates three patients who presented to our outpatient department at different times. Two patients were diagnosed with zinner syndrome and one patient with midline prostatic cyst.

Case Series

A 29 year old male presented to our outpatient department (OPD) with the chief complaint of primary infertility. He did not give any history of lower urinary tract symptoms, hematuria or trauma. No significant finding was observed on physical examination and all blood investigations were normal.

Semen analysis was done for him which revealed a volume of only 1 ml and a sperm count of 4 million/ml. Trans rectal ultrasound (TRUS) was performed which showed cystic dilation of left sided seminal vesicles, thickened left sided vas

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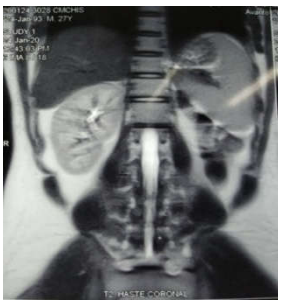
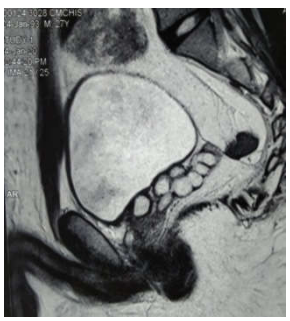
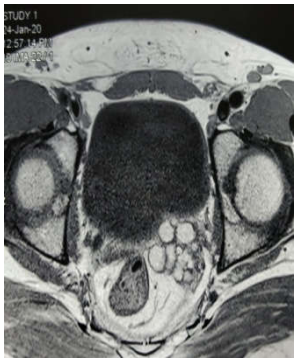
T2 weighted imaging confirmed these findings, and left renal agenesis was also noted. These findings were all consistent with Zinner's Syndrome.(1 a,b,c) The patient was managed by transurethral resection of left ejaculatory duct.(2) Patient was followed up and showed improved semen parameters.



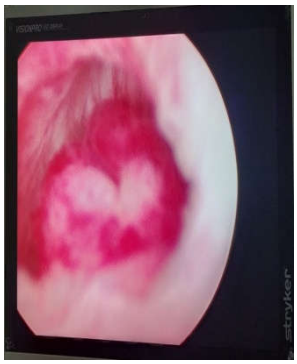
1(a) T2 weighted coronal MRI film showing absent left kidney



1(b) T2 weighted saggital pelvic MRI showing enlarged seminal vesicles

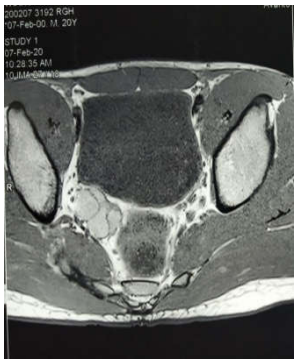


1(c) T1 weighted axial MRI showing dilated seminal vesicle cysts.

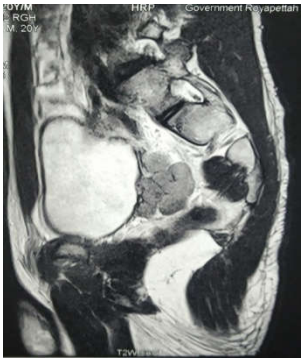


2. urethroscopy showing seminal vesicle cyst bulging into the prostatic urethra causing ejaculatory duct obstruction

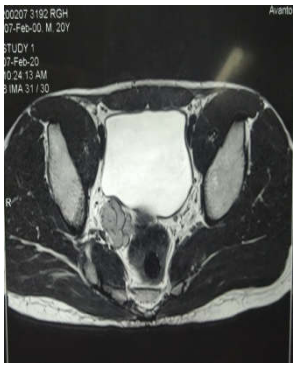
A 16 year old male presented to our OPD with right sided loin pain, not associated with any other symptoms. TRUS revealed and MRI confirmed right sided renal agenesis with ipsilateral dilation of seminal vesicles on the right.(3a,b,c,d) No abnormality was detected on cystoscopy and the patient was managed conservatively.



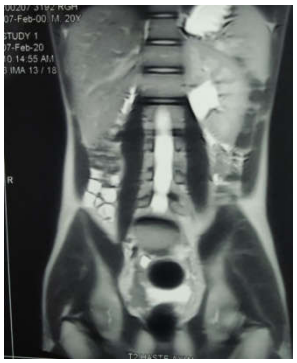
3(a)T 1 weighted axial MRI film showing right seminal vesicle cysts



3(b) T2 weighted MRI saggital film showing seminal vesicle cysts

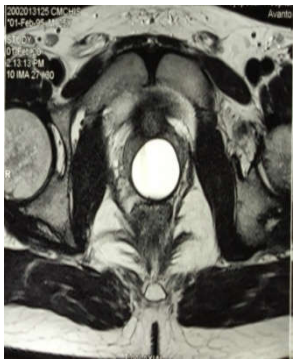


3(c) T2 weighted axial MRI film showing seminal vesicle cysts on right side with normal seminal vesicles on left side

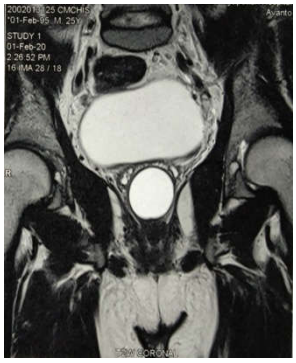


3(d) T2 weighted coronal MRI film showing absent right kidney

A 25 year old male presented to the OPD with history of dysuria and increased frequency of micturition since one year. Digital rectal examination revealed an enlarged prostate having cystic consistency. MRI revealed a midline prostatic cyst of 3cm x 2.8 cm.(4a,b) Cystoscopy was performed followed by trans rectal aspiration of prostatic cyst. The patient was prescribed a course of antibiotics post operatively.



4(a) T2 weighted axial MRI pelvis showing bright prostatic cyst



4 (b) T2 weighted coronal film showing hyperintense prostatic cyst compressing the bladder

DISCUSSION

Prostatic cyst is a rare congenital disease which can be attributed to a number of etiologies, that mainly include cysts arising from mullerian ducts and utricle remnants, ejaculatory duct diverticulum, prostatic retention cyst and Zinner's Syndrome.[1] Diagnosis can be confirmed on MRI, as based on their location, mullerian duct cysts and ejaculatory duct cysts are midline while diverticulosis and ureterocele are lateral.[1]

Zinner syndrome is a rare congenital malformation characterized by ipsilateral renal agenesis, ipsilateral seminal vesicle cyst and ipsilateral ejaculatory duct obstruction.[2] zinner syndrome is considered as male equivalent of Meyer Rokitansky Kustner Hauser (MRKH) syndrome in females.[3] Most of the congenital anomalies are discovered and diagnosed in 2nd-4th decade of life.[4] incidence of seminal vesicle cysts is known to be around 0.005% and 2/3rd are found to be associated with ipsilateral renal agenesis.[5] Patients present with pelvic/perineal pain, dysuria, painful erection, chronic epididymitis/prostatitis and occasionally infertility.[6] Transrectal ultrasound(TRUS) has been proved to be a good imaging modality for diagnosing cysts as it has high accuracy, is cheap, easily available, quick and has no radiation risk.[7] MRI is more effective in assessing ejaculatory duct and seminal vesicles due to its high resolution property.[8] MRI is also helpful in planning surgical excision of seminal vesicles depending upon size and location of cysts.[9] invasive treatment is restricted to symptomatic cases or failed conservative management. Perineal, laparoscopic or percutaneous cyst drainage and transurethral cyst deroofing is considered therapeutic and relieves ejaculatory duct obstruction.[10] In the present case series, the first patient presented with primary infertility and there was significant improvement in semen parameters after transurethral resection of ejaculatory duct obstruction. The second patient had minimal symptoms and normal cystoscopy so he was managed conservatively. The third patient with midline prostatic cyst was managed with transrectal aspiration of the cyst and followed up aggressively.

CONCLUSION

Congenital prostatic cysts are rare congenital variants. Diagnosis of zinner syndrome should be considered in patients with ipsilateral renal agenesis and ipsilateral seminal vesicle cyst. Diagnosis may be delayed or even missed because of non specific symptoms. TRUS and MRI are the imaging modalities of choice, MRI being confirmatory owing to its higher resolution. Management depends upon the symptoms of the patients, size and location of the cyst. Treatment options include transurethral resection of the ejaculatory duct and aspiration of the cyst through perineal, laparoscopic or percutaneous approach.

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