Paraurethral cyst with multiple stones: A rare case report

Gaurav Prakash, Shreya Karan¹, Satya Narayan Sankhwar, Sangeeta Karan¹

Department of Urology, King George's Medical University, Lucknow, Uttar Pradesh, ¹Department of Gynecology and Obstetrics, Park Clinic Dhanbad, Jharkhand, India

Abstract Paraurethral cyst is a benign cystic disorder of anterior vaginal wall. Many secondary complications have been described in literature, but stone formation in the cyst is a rare phenomenon. We are reporting a case of a 35-year-old multiparous woman who presented with lower urinary tract symptoms, dysuria, and dyspareunia. She was diagnosed as a case of the paraurethral cyst with stones and was managed successfully. Various differential diagnoses have been suggested, most important being urethral diverticulum, ruled out by urethroscopy. Many imaging modalities have been described, but physical examination plays the key role in reaching the diagnosis of stone. For definitive management incision over the cyst with stone removal followed by marsupialization is performed to prevent recurrence.

Key Words: Paraurethral cyst, stone, urethral diverticulum

Address for correspondence:

Dr. Gaurav Prakash, Department of Urology, King George's Medical University, Lucknow - 226 003, Uttar Pradesh, India. E-mail: gaurav.kgmc08@gmail.com Received: 23.01.2016, Accepted: 08.04.2016

INTRODUCTION

The paraurethral cyst is a benign cystic disorder found at the base of urethra inferiorly or inferolaterally. Reported incidence in various literature is I–6% and found in the age group of 20–60 years.^[1] Many secondary complications in the form of abscess and recurrent infections have been reported, but cyst with multiple stones are not commonly found. The paraurethral cyst has been broadly classified into four types. Skene gland cyst, Mullerian cyst, and Gartner cyst are congenital in nature while inclusion cyst is acquired.^[2] Clinical presentation of these cysts is palpable or visible suburethral swelling presenting as something coming out per vaginum, irritative lower urinary tract symptoms, dyspareunia, and recurrent urinary tract infection which persist despite medical treatment. No proper protocol regarding diagnosis and management of paraurethral cyst has

Access this article online	
Quick Response Code:	Mahaita
	www.urologyannals.com
	DOI: 10.4103/0974-7796.192088

been described in literature. We are reporting a rare case of a 35-year-old multiparous woman who presented with persistent dysuria and dyspareunia with lower urinary tract symptoms. She was later found to be a case of paraurethral cyst with multiple stones and was managed successfully.

CASE REPORT

A 35-year-old multiparous woman presented with complaints of irritative lower urinary tract symptoms, dyspareunia, and lower abdominal pain for the last 3 months. She has no relevant operating or medical history except recurrent urinary tract infection. On local examination, a nontender firm mass of size around 4 cm \times 4 cm over the anterior vaginal wall was palpable with gritty sensation on touch. Rest of the vaginal

For reprints contact: reprints@medknow.com

How to cite this article: Prakash G, Karan S, Sankhwar SN, Karan S. Paraurethral cyst with multiple stones: A rare case report. Urol Ann 2016;8:509-11.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

examination was normal. Her routine urine examination was normal, and urine culture was sterile. On ultrasonography whole abdomen, no stone was found in kidney, ureter, and bladder. On cystourethroscopy bladder was found normal, and bilateral ureteric orifice was normally visualized with clear efflux. The urethra was found normal with no diverticula or neck of the infundibulum was noted. As physical examination suggested the provisional diagnosis of para urethral cyst with stones inside and urethroscopy ruled out any possible urethral diverticulum no further imaging was done. The patient was planned for surgery. A 2 cm transverse incision was given over most prominent part, and cyst was opened [Figures I and 2]. Multiple stones of size around 0.5-1 cm were found inside the cyst and were extracted [Figure 3]. No urethral communication was appreciated; thus, marsupialization of cyst was done. Postoperative period remained uneventful and at 6 months follow-up, the patient is symptom-free and is voiding well.

DISCUSSION

The paraurethral cyst is derivative of urogenital sinuses, and recurrent infection is quite common, but the presence of stone inside is rarely reported in literature.^[3] Different types of cyst are found at various locations in the vaginal wall. While Gartner cyst is found posteriorly in the vagina, Skene's gland cyst is found more anteriorly as in our case. Skene's gland are considered as prostatic homologs and are derivative of urogenital sinus lined by stratified squamous epithelium.[4] Pathogenesis of stone formation is not clearly understood, but stasis of infected exudate with deposition of salt and desquamated epithelium covering the cyst is suggested to be one cause of stone formation.^[3] In our case, as stone analysis suggested phosphate type of stone mixed with calcium oxalate, it is obvious that stasis and infection contributed to stone formation. However, as calcium oxalate crystals are also found, the possibility of a closed diverticulum cannot be ruled out. As these masses are present anteriorly in vagina various differential diagnoses such as congenital cyst, ectopic ureterocele, urethral abscess, benign solid growth, and urethrocele should be considered. Most important differential diagnosis is urethral diverticulum which presents with similar signs and symptoms. Blaivas et al. reported a diagnosis of paraurethral masses in 4% of their patient and most (84%) were found to be urethral diverticula.^[1] Cross *et al.* examined 140 asymptomatic women (mean age 41 years) using endovaginal and perineal sonography. A proportion of 2.9% of cases revealed asymptomatic paraurethral cystic structures lying adjacent to the urethra while the communication with the urethra was not convincingly demonstrated in any of the cases.^[5] Hence, cystourethroscopy is must to rule out urethral diverticulum. Many a times, physical examination are suggestive of diagnosis as in our case, imaging like magnetic resonance imaging and transvaginal sonography should be kept only



Figure 1: Paraurethral cyst present at base of urethra



Figure 2: Inside view of cyst and its wall



Figure 3: Multiple stones four in number

for those cases where diagnosis remain uncertain. Various management options have been described in literature including excision or marsupialization of cyst after stone retrieval. However, complete excision of cyst has certain limitation such as injuring or weakening of urethral wall which can lead to urinary incontinence or urethra-vaginal fistula formation later on.^[6-8] Blaivas *et al.*^[1] reported complete urethral excision in four patients in which two patients had urethral injury which was repaired surgically and the catheter was placed for I week. In our case we did stone removal with marsupialization and in the post-operative period no evidence of hematoma, infection or scar formation was found.^[9]

CONCLUSION

The paraurethral cyst is common benign cystic disorder of anterior vaginal wall and complication like infection and abscess has been described, but cyst with multiple stone inside is a rare phenomenon. Physical examination is sufficient for establishing a diagnosis. Cystourethroscopy is must to rule out urethral diverticula and stone removal followed by marsupialization is one of the options for management.

Financial support and sponsorship Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Blaivas JG, Flisser AJ, Bleustein CB, Panagopoulos G. Periurethral masses: Etiology and diagnosis in a large series of women. Obstet Gynecol 2004;103 (5 Pt 1):842-7.
- 2. Das SP. Paraurethral cysts in women. J Urol 1981;126:41-3.
- Shibayama T, Nakashima J, Nakamura S, Morinaga S. A case of parameatal urethral cyst with calculi. Hinyokika Kiyo 1993;39:961-3.
- Eilber KS, Raz S. Benign cystic lesions of the vagina: A literature review. J Urol 2003;170:717-22.
- Cross JJ, Fynes M, Berman L, Perera D. Prevalence of cystic paraurethral structures in asymptomatic women at endovaginal and perineal sonography. Clin Radiol 2001;56:575-8.
- Isen K, Utku V, Atilgan I, Kutun Y. Experience with the diagnosis and management of paraurethral cysts in adult women. Can J Urol 2008;15:4169-73.
- Imamverdiev SB, Bakhyshov AA. Surgical treatment of paraurethral cysts in women. Urologiia 2010;(2):39-41.
- Yilmaz Y, Celik IH, Dizdar EA, Demirel G, Yurttutan S, Erdeve O, *et al.* Paraurethral cyst in two female newborns: Which therapy option? Scand J Urol Nephrol 2012;46:78-80.
- Sharifiaghdas F, Daneshpajooh A, Mirzaei M. Paraurethral cyst in adult women: Experience of 85 case. Urology J 2014;11:1896-8.