Female Urethral Diverticulum: A Case Report

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Abstract

Background: A urethral diverticulum is an out pouching arising from the urethra. The prevalence is unknown. Only 1-6 % cases are reported. Patrons present with recurrent urinary tract infections, urine dribbling and dysparunea. Case: A 60 year old patient presented with recurrent UTI, dysuria and urinary dribbling. On examination there was a urethral diverticulum. Excision and reconstruction of the urethra was done.

Conclusion: Proper examination is necessary in patients presenting with urinary complaints. Many cases of urethral diverticulum remain undiagnosed. Excision of the diverticulum must be done by an experienced urogynaecologist or urologist to prevent complications.

Keywords: Urethral diverticulum, female, excision

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Introduction

A urethral diverticulum (UD) is an outpouching sac arising from the urethra.[1] It may present as a lump near the urethra or pain along the length of the urethra. On pressing the diverticulum external urethral discharge may be seen.[1] It may vary in size from 3mm to 4cm.[2] The etiology of UD is mostly unknown but it may be congenital or acquired. Congenital cases may result from remains of Gartner's duct or abnormal fusion of primordial folds.[3] Many cases are acquired and are caused due to repeated infections and obstruction of the periurethral glands. These rupture and open into the urethral lumen and the cyst epithelializes.[4] It is an underdiagnosed condition and the prevalence is cannot be estimated exactly because only approximately 1% to 6% of cases are reported.[1] Patients may present with multiple symptoms including dyspareunia, incontinence, post micturition dribbling, recurrent UTI, tender mass, frequency and urgency.[5] A case of a patient with recurrent UTI and incontinence is reported who had a 3cm diverticulum.

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Case History

A 60-year-old lady presented with complaint of urinary incontinence, dysuria and recurrent urinary tract infections for the last 4 years. She had to use incontinence pads due to the continuous dribbling of urine.

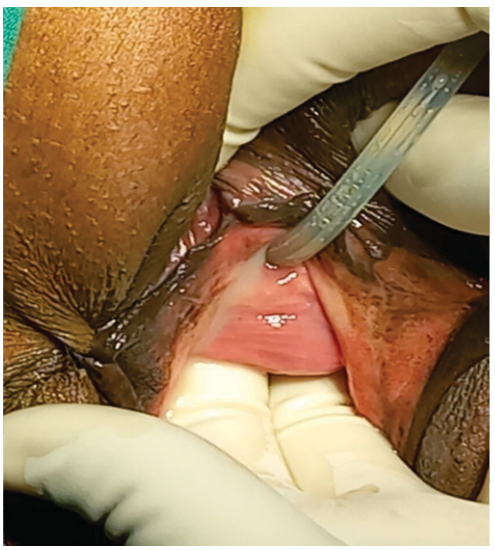

Fig-1: *urine flowing with pressing the diverticulum*

She had taken multiple courses of antibiotics for the recurrent urinary tract infections. On examination she was found to have 3cm large urethral diverticulum. On pressing the diverticulum urine flowed which was pus filled. She was advised urine complete examination and urine culture. The reports showed urinary tract infection and culture showed growth of pseudomonas. The

infection was treated and plan of excision of the diverticulum was made after treatment of the infection. After all the pre-op preparation excision of the diverticulum was done. Aseptic measures were taken, patient was catheterized and put in lithotomy position. A 2cm midline incision was made 1cm under the external urethral diverticulum. The urethral diverticulum was separated by sharp and blunt dissection. It was excised. Methylene blue dye test was done. A martius flap was harvested from the left labia majora and sutured to the area from where the diverticulum was excised.

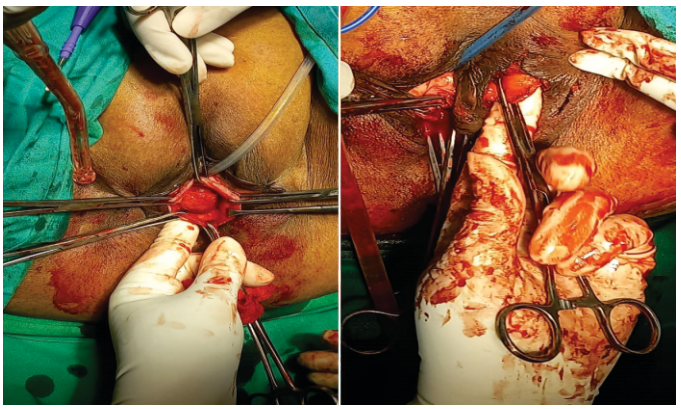

Figure 2: *Urethral Diverticulum after Dissection*

Figure 3: *Martius graft being harvested*

Hemostasis was secured and vaginal epithelium was closed in layers. A tube drain was placed in the labia majora from where the graft was harvested and the incision was closed with interrupted mattress sutures. Vaginal packing was done with 1 roll gauze. Packing was removed after 24 hours and patient was kept catheterized for 21 days.

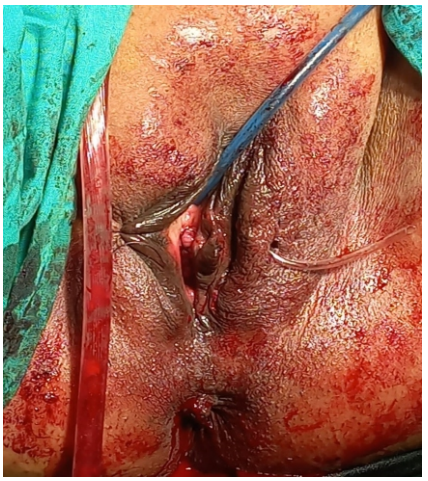

Figure 4: *Post repair picture with tube drain*

Discussion

A urethral diverticulum in this age group is most likely due to the obliteration of the periurethral glands.[4] In a study Four hundred forty-seven women were included who were suspected to have a urethral diverticulum but only 228 women had a documented urethral diverticulum. The common presenting complaints were painful and repeated infections.[5] Diagnosis of urethral diverticulum is clinical but the use of cystoscopy, transvaginal and transperineal usg helps in diagnosis. Urodynamic studies may also be done in complicated cases[6]. After the diagnosis is confirmed the treatment of choice is to excise the diverticulum and to reconstruct the urethra vaginally. The basic steps of the procedure include excision of the diverticulum, water tight closure of urethra and closure of the layers of tissues in the surrounding. Results are usually satisfactory but recurrence has been reported. The use of a Martius graft to revascularise the poor quality tissues has shown to be of advantage. Urinary incontinence can be prevented due to the cushioning effect of the martius flap[6]. Urethral strictures, urethrovaginal fistulas and urinary in continence can be possible complications.[7] These kind of surgeries should be done by urologists or urogynaecologists with vast experience in such kind of procedures[8]. Another surgical options is Endoscopic re-roofing or transurethral incision, in this the narrow diverticular neck is converted into wide diverticular neck allowing free drainage[1]. Marsupialization of the urethral diverticulum through the vaginal approach can be done. An incision is made through the diverticulum to the urethral orifice. To encourage fibrosis the cavity may be packed with oxidized cellulose. There is high risk of urethrovaginal fistula and splayed stream after marsupilization, therefore it should only be considered if the patient is frail, elderly and unfit to undergo diverticulectomy.[9] Recurrence/incomplete excision, Urethral stricture and Urethravaginal fistula are known complications[7].

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Authors Contribution

NH: Conceptualization of Project
SM: Literature Search
NH, SM: Drafting, Revision