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## Giant Anterior Urethral Diverticulum Misdiagnosed As Urethral Stricture: Case Report.

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### Case Report

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#### ABSTRACT

Urethral diverticulum is a sac-like out-pouching of urethral mucosa. It may be anterior or posterior and is less common in males. It can be congenital or acquired. The most common etiologies of male acquired diverticula are strictures, abscess, trauma or post-hypospadias repair. We report a case of acquired urethral diverticulum that is post-traumatic and misdiagnosed as a urethral stricture. On Retrograde Urethro Cystogram (RUCG), a huge urethral outpouching was seen in the proximal anterior urethra with pool of contrast medium within it suggestive of a giant diverticulum. The demonstrated mass was palpable even before the RUCG examination. Imaging (RUCG) is very essential in differentiating between urethral diverticulum and urethral strictures, thus should be requested in evaluation of patients with such diagnosis.

#### INTRODUCTION

Urethral diverticulum is a sac-like out-pouching of urethral mucosa [1]. It may be anterior or posterior and is less common in males than females. It can be congenital or acquired. The most common etiologies of male acquired diverticula are strictures, abscess, trauma or post-hypospadias repair.

We report a case of acquired urethral diverticulum that is post-traumatic and presented with signs and symptoms of urethral stricture thus misdiagnosed as such and review the literature on the topic.

The aim of this report is to highlight the role of imaging in differentiating urethral diverticulum from urethral stricture so as to aid prompt diagnosis as their management modalities differ; and to sensitize surgeons to request for retrograde urethrography in suspected cases of urethral strictures or diverticulum.

#### Case Presentation

Mr. AA is a 60 years old male farmer who presented in Surgical Outpatient Department (SOPD) in a tertiary institution in Kebbi State, Northwestern Nigeria with signs of urethral stricture. At presentation, he complained of poor urinary stream frequency, straining to void and interruption of urinary stream, and urinary retention of 4 weeks duration.

There was no history of fever, loin pain or hematuria. No previous history of retention, there was a past history of a fall astride from a height about a year prior to presentation but did not seek medical attention then.

In view of acute retention and difficulty in catheterization per urethra, a supra pubic cystostomy was done and diagnosis of urethral stricture was entertained. A Retrograde Urethro Cystogram (RUCG) was requested to demonstrate the extent of the stricture for definitive surgical intervention.

On Retrograde Urethro Cystogram (RUCG), a huge urethral out pouching was seen in the proximal anterior urethra with pool of contrast medium within it suggestive of a giant diverticulum. There was a palpable mass demonstrated at the ventral aspect of the penis even before RUCG examination. In addition, there was slight reduction in the caliber of the outlined urethra with marginal irregularities in keeping with inflammatory process presumably urethritis.

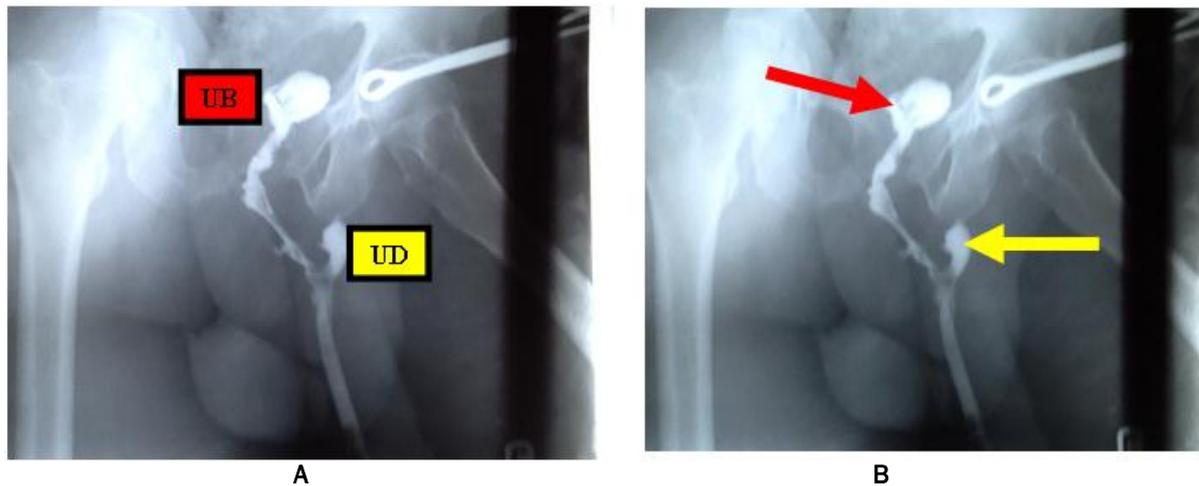


Figure 1: (A)-Antero-Posterior View; (B)-Oblique View: Showing the Huge Urethral Diverticulum and Bladder within the Pelvic Cavity. UD: Urinary Diverticulum, UB: Urinary Bladder.

## DISCUSSIONS

Trauma (blunt perineal trauma) can injure the anterior urethra and cause its rupture or diverticula formations. <sup>1</sup> It is usually not associated with a fracture <sup>1</sup> as is the case with our patient who had a history of fall astride from height before presentation. This is most likely the etiology of the giant diverticulum in this case. Possible causes of urethral diverticulum include strictures, urethritis, abscess, post-hypospadias repair among others.

Urethral trauma is almost entirely restricted to the males being exceptionally rare in females urethra unless there is very major pelvic trauma <sup>[1]</sup>.

Urinary retention was among the presenting symptoms in our patient and usually when a male patient with urine retention and a urethral catheter cannot be passed under adequate lubrication and analgesia, urethral stricture should be suspected even in the elderly, hence the justification for making assessment of urethral stricture in this case. However, failed catheterization may not always be due to urethral stricture, other causes of failure in urethral catheterization include urethral polyps, urethral tumours, urethral diverticulum, and enlargement of the median lobe or subcervical segment of the prostate gland among others. In our patient, the failure of catheterization per urethra was due to a giant urethral diverticulum that has compressed and occluded the urethra.

Urethral stricture and benign prostatic hyperplasia (BPH) are the leading causes of urinary retention in males in most part of the world <sup>[2,3]</sup>. The main causes of urethral stricture are urethral infection and urethral trauma. <sup>45</sup> Urethral stricture generally affects males between 20 and 50 years of age. Even when the patient presents after 50 years of age, symptoms often dates back to some years prior to the fifteenth year <sup>[4,5]</sup>.

Most strictures and diverticulum develop during the first year following urethral trauma or infections <sup>[5,6]</sup>. Just like is the case in this patient gradually gives rise to increasing difficulty in micturition.

The diagnosis of diverticula based on the vast array of presenting symptoms is difficult. Classically, the milking of purulent discharge from the urethra after compressing the suburethral area during

examination is highly specific, although poorly sensitive. A urine analysis and culture should be sent; women often complain of recurrent urinary tract infections [7]. Cystoscopy can be performed to thoroughly evaluate the urethral anatomy. Other imaging modalities available for evaluation include double-balloon positive-pressure urethrography, voiding cystourethrography, intravenous urography, ultrasonography, and magnetic resonance imaging. Several case reports have presented malignant diverticula [8]. The presenting symptoms were commonly hematuria and urinary symptoms.

### CONCLUSION

Imaging (RUCG) is very essential in differentiating between urethral diverticulum and urethral strictures, thus, should be requested in evaluation of patients with such diagnosis.

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