Case Report

Acquired Urethral Diverticula after Long-Term Cycling, A Case Report

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Abstract

Urethral diverticula are rare in males and most are acquired. Herein we are reporting a young boy with history of two years professional cycling and complained about urinary incontinency especially during cycling and, post-void dribbling successfully managed by surgical excision of bulbar urethra diverticulum.

Keywords: Urethral diverticulae, Urinary incontinence, Post void dribbling Male, Cycling

Introduction:

Urethral diverticula (UD) are rare clinical entities in males with a peak age incidence of 25 to 45 years and most are acquired(1) usually occur at the penoscrotal junction or bulbous urethra(2, 3). Patients may presents with recurrent Urinary Tract Infections (UTI), incontinence, pelvic pain, post-void dribbling, dysuria, urgency and frequency(1). A perineal mass or swelling at the penoscrotal junction may occur and urethrocutaneous fistula may develop if infected (4). Herein we are reporting a young boy with history of two years professional cycling and complained about urinary incontinency especially during cycling and, post-void dribbling. The present report is involved with human participant, who signed the informed consent.

Case Presentation:

A 17-year-old male with no specific pathological history presented to the urology department, having complain of post void dribbling and incontinence of urine which initially started for a year before and gradually increased in severity over the past 3 months. No abnormality seen on physical examination. Blood and urine investigations revealed in normal range. He mentioned that he has started professional cycling since two years ago. A simultaneous voiding cystourethrogram and retrograde urethrogram showed a large diverticulum in bulbous urethra, no stricture seen in other parts of urethra (Figure 1-A). Patients were placed in exaggerated lithotomy under spinal anaesthesia. A 0° optic 17 Fr cystoscope was passed and only demonstrated a pinpoint ostium located on the bulbar urethra at 6 o’
clock which was hard to find it and inserted a
guide wire through it into the diverticula.
The affected segment of bulbous urethra was
completely excised (Figure 1-B) and primary
repair was performed longitudinally over a
transurethral 16 French silicone catheter. A
layer of tunica vaginalis and penile dartos
was interposed to avoid fistula. Postoperative
recovery was uneventful. The Pathologic
examination reported stromal chronic
inflammatory accompanied by fibrosis and
granulation tissue. Three weeks later the
pericatheter retrograde urethrogram showed
a normal urethra (Figure 2) and the catheter
was removed. The patient voided normally
after the removal of the catheter and is doing
well at 6 months of follow-up.

Discussion:

UD is an out-pouching of the urethral wall
and having a free communication with the
urethral lumen (4). Acquired UD's often result
from blunt trauma, stricture, infection and
surgical implants erosion into the urethral
lumen (5, 6). UD have also been recognized
as a complication resulting after hypospadias
or urethral stricture repair (7) and transurethral prostate or bladder procedures
(5). The communication between the UD and
the urethral lumen may have a narrow (like
our case) or a wide neck (5). Suspected
etiopathogenic theories for acquired male UD
is; the first mechanism is related to
obstruction and increased urethral pressure
upstream of an obstruction which leads to
herniation of the urethral epithelium. The
second mechanism is a result of constant
pressure distributed on the penoscrotal angle,
which causes chronic urethral ischemia and
finally the formation of scars. The main
pathology finding in our patient due to
professional cycling nearly 140 kilometer per
week. The third mechanism incorporates
anorectal malformation repair with UD.
Another mechanism is rupture of the periurethral glands into the urethral lumen
secondary to obstruction that could generate
epithelization and the forming periurethral
cavity. Also UD can develop secondary to
suppuration and necrosis of urethral wall
following trauma, endourethral manipulation
and drainage of a prostatic or periurethral
abscess (3, 4, 8). The diagnosis of male UD
depends on a detailed history-taking and
radiologic studies, including retrograde
urethrography and voiding cystourethrography (2). While many patients
who present with symptoms related to the UD
require surgical correction. Consideration
should be given to symptoms, the size and
thickness of the UD wall, integrity of the
corpus spongiosum and concomitant urethral
pathology (5, 8). Uncomplicated
asymptomatic UD can be managed watchful
waiting provided the patient commits to
regular follow-up (5). The recommended
treatment for complicated symptomatic UD
is surgical excision of diverticulum and
urethral reconstruction, maintain the patency
and unity of urethra and an additional tissue
cover if required (3, 9, 10). In our case, due
to the urinary symptoms, a surgical
management was decided. On follow up after
6 months the patient had no urinary
symptoms.

Conclusion:

In this paper, we described a young male
individuals presenting with a large UD of the
bulbar urethra. The possible
aetiopathogenesis for the diverticulum, in this case, may be caused by prolonged cycling as a result of constant pressure distributed on the penoscrotal and prineal region which causes chronic urethral ischemia and induces urethral fibrosis and scar formation.

**Conflict of Interest:**

None declared.

**References:**

Figures:

**Figure 1:** A) cystourethrogram showed a large diverticulum in bulbous urethra, B) Intraoperative images of the Perineal dissection showing the bulbar urethra already dissected.

**Figure 2:** Postoperative pericatheter retrograde urethrogram showing a clearly defined urethra without any strictures or diverticulum.