

# Primary carcinoma of Anterior Urethra Presenting as a Benign Urethral Stricture Disease – Case report

Type of Article: Case Report

John E Raphael, Onyenunam Ngozi Ekeke

*Urology division, Department of Surgery, University Of Port Harcourt Teaching Hospital, and Port Harcourt Rivers State, Nigeria*

## ABSTRACT

### BACKGROUND

*Primary cancers of the male urethra are rare and only few cases have been reported. Primary urethral cancer, the only urological malignancy that is more common in females; accounts for less than 1% of all urological malignancies. The rarity of this disease thus present with challenges in diagnosis. It is on this background that this case of primary male urethral cancer initially diagnosed as urethral stricture disease is reported for its rarity.*

### METHOD

*The case note of the patient was retrieved and the management reviewed. Relevant literature search was also done.*

### RESULT

*A 43 year old man presented with a four month history of progressive diminution of urine stream associated with obstructive lower urinary tract symptoms and acute urinary retention. There was no history of trauma, but he had a past history of urethritis 15 years earlier which was treated with antibiotics. Evaluation showed a 1.0cm x1.0 cm indurated mass with urethrocutaneous fistula at mid-shaft of penis. Supra-pubic cystostomy was done after failed catheterization. A clinical diagnosis of post inflammatory urethral stricture was made. Retrograde and micturating cysto-urethrogram showed a long segment, 3.5 cm peno-bulbar anterior urethral stricture with urethrocutaneous*

*fistula at mid-shaft of penis. He was then planned for a substitution urethroplasty. Intra-operatively, the strictured segment appeared abnormal with a mass invading the corpora carvenosa. Biopsy showed primary squamous cell carcinoma of the urethra. He was counseled for penectomy with perineal urethrostomy for optimal oncological control. He refused surgery. The tumor rapidly progressed and spread further proximally along the shaft of the penis. Three weeks later, he gave consent for total penectomy with perineal urethrostomy which was done.*

### CONCLUSION

*Urethral cancers are rare. Early presentation by the patient and a heightened index of index of suspicion will reduce the need for radical surgeries which is often not desirable*

### KEYWORDS

*Urethral cancer; urethritis; urethral stricture*

*Correspondence : Dr Raphael J. E.  
Email: drraphaeljohn@yahoo.com*

### INTRODUCTION

Primary cancers of the male urethra are rare and only few cases have been reported. Primary urethral cancer is the only urological malignancy that is more common in females and accounts for less than 1% of all urological malignancies<sup>1,2</sup>.

The rarity of the disease present with challenges in diagnosis because the clinical

presentations is similar to urethral stricture of benign origin<sup>2</sup>.

The limited available studies, often small size case series and retrospective studies thus hinder analysis of treatment method<sup>1,3</sup>.

We present a case of primary male urethral cancer initially diagnosed as urethral stricture disease.

### CASE HISTORY

A 43 year old man presented with a four month history of progressive diminution of urine stream associated with obstructive lower urinary tract symptoms. This culminated in acute urinary retention. There was no history of trauma, haematuria, genital rashes nor urethral instrumentation but the patient reported he had urethritis 15 years ago which was treated by a nurse with antibiotics.

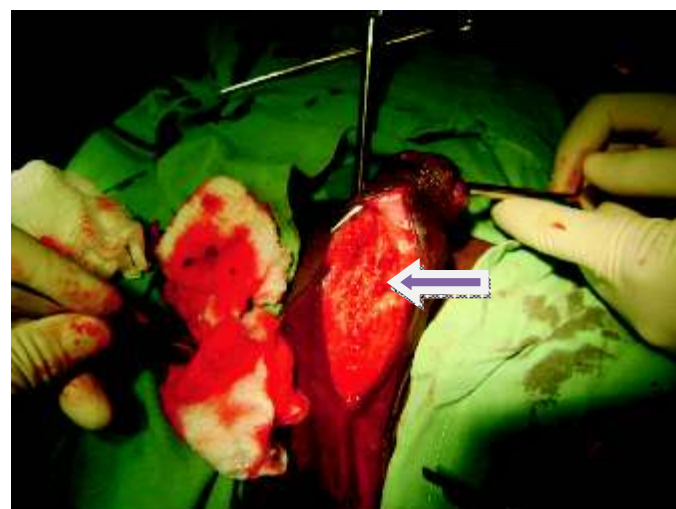
On examination, his bladder was distended. He had an indurated mass measuring 1 x1 cm associated with urethrocutaneous fistula at mid-shaft of penis. Attempt at urethra catheterization failed. A clinical diagnosis of post inflammatory urethral stricture was made. Urinary diversion by supra-pubic cystostomy was done and he was placed on antibiotics.

Retrograde and micturating cystourethrography showed he had a long segment, 3.5 cm peno-bulbar anterior urethral stricture with urethrocutaneous fistula at mid-shaft of penis. He was then planned for a substitution urethroplasty.

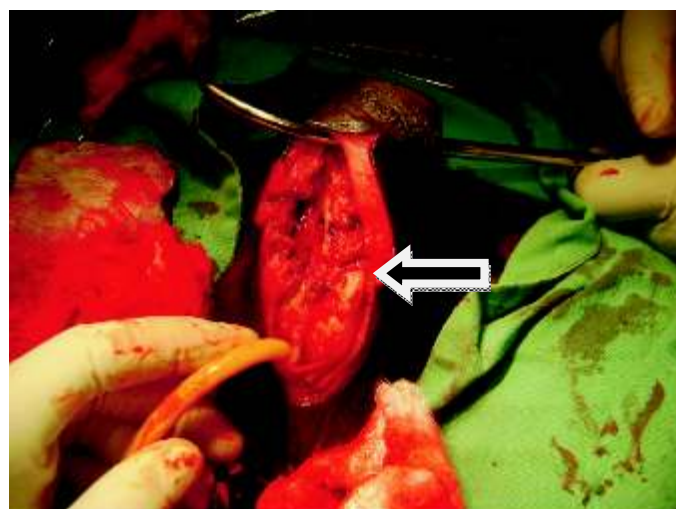
At surgery, the strictured segment appeared abnormal with a mass invading the corpora carvenosa, and extending up to proximal half of the penis. (Figure1a & 1b). A biopsy was then taken and tissue histology showed primary squamous cell carcinoma of the urethra.

The patient was counseled for penectomy with perineal urethrostomy for optimal oncological control. The patient understandably refused

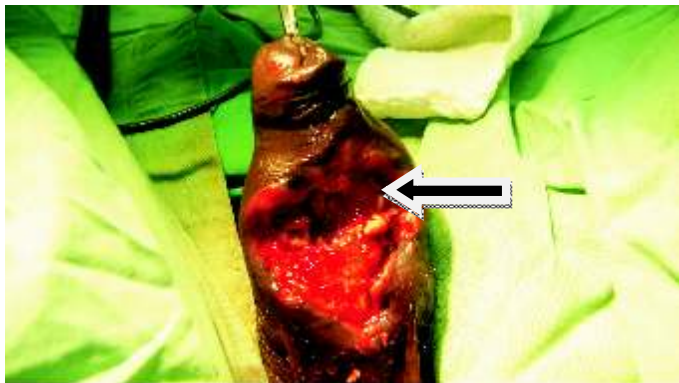
surgery. While he was considering traveling for radiotherapy, which was not available, the tumor rapidly progressed and spread further proximally along the shaft of the penis (Figure 2). At this point, 3 weeks later, he gave consent for total penectomy with perineal urethrostomy . This was done after informed consent was obtained. The post-ops period was uneventful. Wound healing was good. Urethral catheter was removed after four weeks. Continence was preserved. He was planned for chemotherapy but could not afford it. Sexual rehabilitation with sex toys for his 38 year old wife was recommended. There was no recurrence during the first 2 years. He was subsequently lost to follow-up.



**Figure 1a.** Showing tumor destruction of urethra with invasion of the corpora cavernosa (Arrow)



**Figure 1b.** Showing tumor destruction of urethra with invasion of the corpora cavernosa with proximal involvement of penis (Arrow)



**Figure 2.** Showing tumor destruction of urethra with invasion of the corpora cavernosa three weeks later. (Arrow)

## DISCUSSION

The presentation of a primary urethral carcinoma is difficult to differentiate from benign strictures of urethra. They are usually associated obstructive lower urinary tract symptom (LUTS) as commonly seen in benign strictures, but may however be associated premalignant lesion such as balanitis xerotica<sup>4</sup>.

Our patient had a four month history of LUTS. The similarity with the symptom of benign stricture resulted in the missed diagnosis. He had a history of urethritis 15 years earlier. Urethritis has been associated with urethral cancer<sup>1,4</sup>. The chronic irritation is thought to trigger metaplasia, and dysplasia with eventual malignant transformation of the epithelium.

Urethra malignancy should be suspected in a patient presenting with a history of urinary symptoms with an indurated urethra mass especially when associated with urethra-cutaneous fistula. This may still be confusing as some strictures may be associated with watering can perineum from urethra-cutaneous fistula. Presence of fistula distal to the bulbar urethral should heighten the suspicion.

Intra-operatively, the finding of a lesion invading the fibrous albuginea of the corpora cavernosa, unusual in benign stricture increased the suspicion for malignancy. (Figure 2). The lesion rapidly spread while

awaiting informed consent from the patient. Squamous cell carcinoma diagnosed in the patient is the commonest histological type seen in the anterior urethra<sup>1</sup>, while transitional cell tumors are more often seen in posterior urethra. Adenocarcinoma of urothelium has also been documented<sup>1</sup>.

Most patients with urethral carcinomas, especially in developing regions tend to present late<sup>5</sup>. Early cancers are uncommon but can be treated by wide excision and urethroplasty. Laser electro resection has also been used<sup>6,7</sup>.

The treatment modality for advance squamous cell carcinoma of urethra includes surgery and radiotherapy.

Radiotherapy is associated with severe spongiofibrosis of the corpora carvenosa<sup>4</sup>. And high recurrence<sup>6,7</sup>. Partial penectomy with glans reconstruction is done for patients with tumor involving the distal half of penis where adequate functional phallic length can be achieved. Total penectomy with permanent perineal urethrostomy is traditionally reserved for patients with proximal penile carcinomas to reduce the risk of a positive margin. Penile preservation procedures have been done using cisplatin based chemotherapy with radiotherapy. This however has a higher risk of erectile dysfunction from corpora fibrosis<sup>8,9</sup>.

## CONCLUSION

Urethral cancers are rare. Early presentation by the patient and a heightened index of index of suspicion will reduce the need for radical surgeries which is often not desirable.

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