

# Urethral squamous cell carcinoma presenting as a Fourniere's Gangrene

Adam Christie<sup>1</sup>, Nathan Lawrentschuk<sup>2</sup>, Ajay Chauhan<sup>3</sup> and Satish Warriar<sup>1</sup>

<sup>1</sup>Colorectal Surgery Department, Peter MacCallum Cancer Centre, Australia

<sup>2</sup>Urology Department, Peter MacCallum Cancer Centre, Australia

<sup>3</sup>Plastic Surgery Department, Peter MacCallum Cancer Centre, Australia

## Case report

Urothelial carcinoma is a rare but aggressive Urological malignancy that accounts for less than 1% of urological malignancies [1]. The age standardised ratio is estimated as 1.1/1,000,000 [2]. It is often difficult to diagnose given its non-specific symptoms which include pain, dysuria, obstructive voiding, or urethral strictures [3]. We review a case of Urethral Squamous cell carcinoma (SCC) presenting as Fourniere's Gangrene and highlight the challenges in management of the condition.

A 47 year old man presented with a 2 month history of scrotal pain. A gangrenous urethra and a perineal abscess with frank pus draining from a sinus were noted on physical examination. Multiple debridements of the left hemiscrotum and perineum were performed at an outside hospital, without resolution of the Fourniers, despite 3 hospital admissions. Eventually, histopathology following a urethrectomy demonstrated a Urethral SCC. Magnetic resonance imaging (MRI) confirmed a lesion involving the Corpora Spongiosum with Spermatic cord involvement and Positron emission tomography showed an FDG-avid lesion in the groove between the anterior abdominal wall and the penile bulb. It was noted on Examination under anaesthesia of the rectum that the lower border of the tumour abutted and invaded the sphincter complex. Prominent Inguinal Lymph nodes were biopsied but demonstrated no evidence of SCC.

In the absence of distal metastases, the multidisciplinary consensus was for a Total Pelvic Exenteration with curative intent.

Intraoperative findings demonstrated a fungating growth at the penoscrotal junction arising from the penile urethra. There was involvement of the scrotal skin, right testicle, spermatic cord and

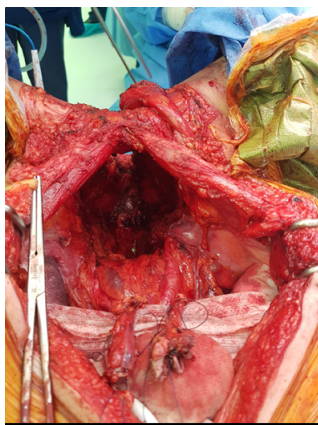


Figure 1. Intraoperative Cranial view following complete surgical resection.

perineum and the tumour extended above the anal sphincter. High anterior resection was performed with en bloc cystoprostatectomy, penectomy and scrotectomy with ileal conduit and end colostomy creation (Figures 1 and 2). A right sided myocutaneous anterolateral thigh flap and a left myocutaneous vertical rectus abdominus flap were used to reconstruct the groin and perineal defects (Figure 3).

The Final histopathology demonstrated a 70 mm well differentiated squamous cell carcinoma of the spongy part of the urethra, invading corpus spongiosum and adipose stroma with a maximum radial invasive thickness of 20mm, well clear of surgical margins. The patient had a relatively uneventful recovery and on 3monthly review the abdominal wound and the myocutaneous flaps had healed well.

## Discussion

Current evidence remains inconclusive in regards to long term survival following treatment, however, Urethral SCC is generally associated with a poor 5 year survival rate of 5 - 15% [4]. Treatment

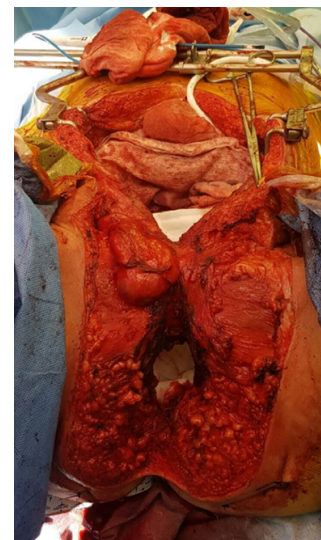


Figure 2. Intraoperative Caudal view following complete surgical resection.

**Correspondence to:** Satish Warriar, Level 7 Peter MacCallum Cancer Centre, 305 Grattan Street, Melbourne Victoria 3000, Tel: 0488054238; E-mail: satishwarriar96101@gmail.com

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**Figure 3.** Intraoperative view of the perineal defect post right sided myocutaneous antero-lateral thigh flap and left myocutaneous vertical rectus abdominus flap.

of these malignancies remain controversial given the limited number of cases. Radical surgical resection however, remains the mainstay of treatment for locally invasive tumours in the absence of metastatic disease [5]. Current guidelines suggest partial or total penectomy is required if there is established invasion into the corpora cavernosum. Primary chemoradiotherapy can be considered in the event of a T1-2 N0 tumour [6].

To our knowledge only four other cases have been reported where a urethral abscess was subsequently diagnosed as a Urothelial carcinoma [7-10]. In 3 out of the previous 4 documented cases the patient was treated with multiple debridements and the administration of broad spectrum antibiotics without resolution, and there was a delayed time to histopathological diagnosis as in our case. Delayed diagnosis is a well-known phenomenon with urothelial carcinoma and likely has an influence on prognosis [4].

Our case highlights the need to consider urothelial carcinoma in the case of recurrent Urethral or Scrotal Abscess not amenable to surgical debridement and antibiotic administration. There is limited data on

the outcomes of this malignancy following radical resection and multi-institution involvement is required to clarify the appropriateness of this approach.

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### Disclosures of interest

The author(s) declare no potential conflicts of interest.

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