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Case Report

SQUAMOUS CELL CARCINOMA OF THE SUPRAPUBIC TRACT: A RARE ENTITY

***Dr. Channabasappa Kori, Dr. Vijay Kumar, Dr. Sameer Gupta, Dr. Neelesh Jain, Dr. D. Prashant Kumar and Dr. Parijat Suryavanshi**

Department of Surgical Oncology, King George's Medical University, Lucknow

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ABSTRACT

Squamous cell carcinoma (SCC) of the bladder is uncommon, but may arise in the setting of long-term bladder catheterization and chronic inflammation. SCC can arise primarily from the suprapubic catheter tract, but fewer than 15 such cases have been reported in the literature. We present a rare case of SCC arising from the suprapubic tract associated with chronic indwelling urinary catheters. SCC must be differentiated from granulomatous conditions, which are common in patients with suprapubic catheters.

INTRODUCTION

Squamous cell carcinoma (SCC) of the bladder is a rare entity and accounts for about 5% of all bladder tumors (Rous, 1978). Risk factors for SCC of the bladder include states of chronic inflammation and infection, such as long-term indwelling catheters or infection with Schistosoma haematobium primarily in endemic regions (Abol-Enein, 2008). SCC of the bladder s more common in the spinal cord injury (SCI) patients has been reported, approximately 2% to 10% beyond 10 years of catheterization (Kaufman *et al*., 1977; Bejany *et al*., 1987; Kalisvaart *et al*., 2010 and Locke *et al*., 1985). Among patients with SCI, about 50% of cases of primary urinary bladder (UB) cancer are SCC. Predisposing factors include chronic irritation and inflammation related to the chronic use of both urethral and suprapubic catheters (Kaufman *et al*., 1977 and Feifer and Corcos, 2008), chronic infections, bladder stones (Groah *et al*., 2002) or, probably, the inherent path physiology of the neurogenic bladder. Majority of patients requiring long-term indwelling catheters are at increased risk of developing SCC, those with suprapubic catheters may rarely develop SCC arising primarily from the suprapubic tract itself (Stroumbakis *et al*., 1993; Schaafsma *et al*., 1999; Ito *et al*., 2011; El-Sebaie *et al*., 2005 and 13). To the best of our, very few cases of SCC arising from the suprapubic tract have been reported in the literature. We present a rare case of SCC arising from the suprapubic tract associated with chronic indwelling urinary catheter.

Corresponding author: Dr. Channabasappa Kori
Department of Surgical Oncology, King George's Medical University, Lucknow

Case report

A 42-year-old male patient who had undergone open cystolithotomy 2 years back presented with ulceroproliferative growth since 4 months with a spontaneous urinary leak from previous suprapubic cystolithotomy scar site and recent history of hematuria since 3 months. Physical examination revealed a ulceroproliferative growth measuring 6x5 cm, involving previous scar site with restricted mobility (fig 1a & 1b). Ultrasound imaging showed mass arising bladder wall involving abdominal wall with no hydroureteronephrosis. On contrast enhanced computed tomographic (CECT) scan of the abdomen, a soft tissue lesion measuring 12 x 10 x 6.3 cm involving anterior and superior wall of bladder, extending in to subcutaneous tissue and abdominal wall (fig 2). Cystoscopy revealed a bladder mass in the dome. Punch biopsy of the growth revealed squamous cell carcinoma, moderately differentiated, probably originating from the vesicocutaneous fistula tract involving the bladder mucosa. Metastatic work up was negative.

Fig. 1a.

Fig. 1b.

Fig. 1a & 1b. Clinical photograph revealed a ulcer proliferative growth measuring 6x5 cm, involving previous scar site with restricted mobility

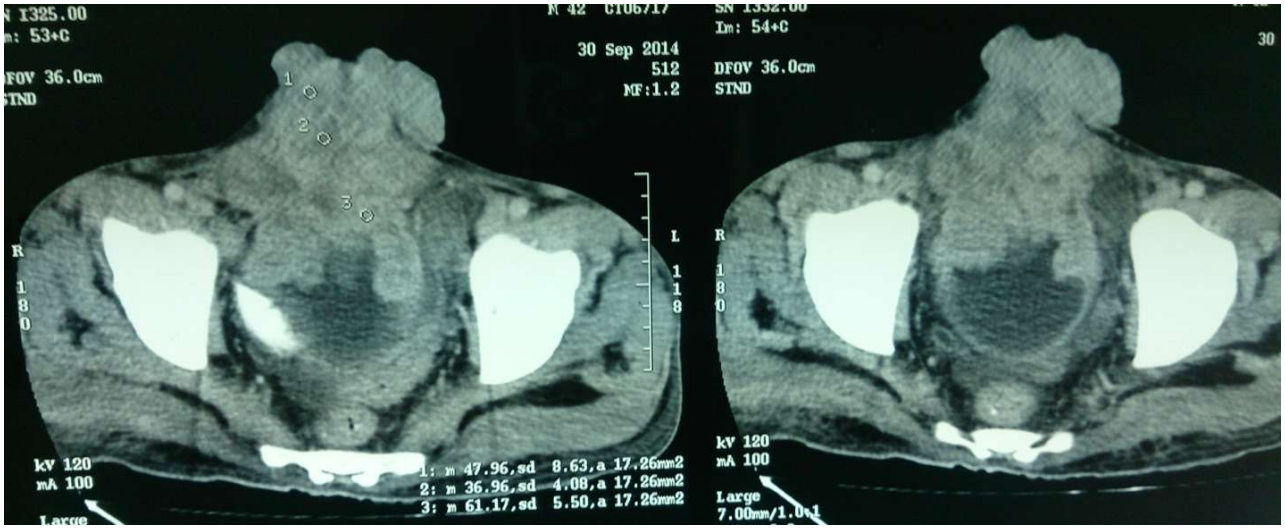

Fig. 2. CECT scan of the abdomen, a soft tissue lesion measuring 12 x 10 x 6.3 cm involving anterior and superior wall of bladder, extending in to subcutaneous tissue and abdominal wall

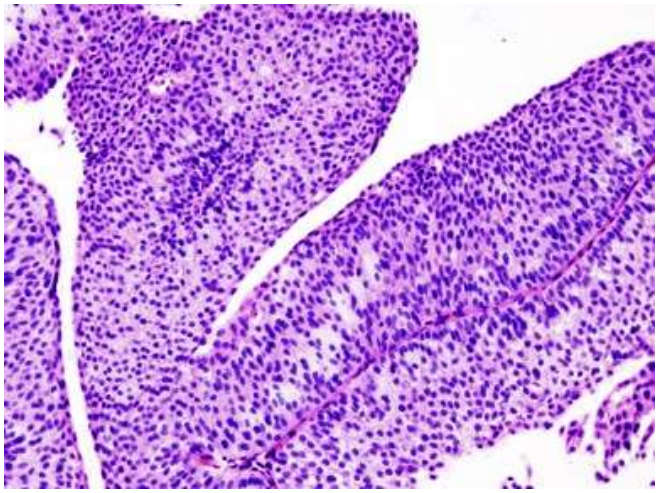

Fig. 3. Photomicroscopy showing Squamous cell carcinoma of urinary bladder

The patient did not want to undergo aggressive surgical excision of the complete bladder and the abdominal wall and underwent chemoradiation therapy (Gemcitabine and Cisplatin based) with progression of the disease. Patient later developed extensive liver and lung metastasis and died 2 months after completion of chemoradiotherapy.

DISCUSSION

SCC of the bladder is a rare disease in the general population, accounting for only 5% of all primary bladder tumors (Rous, 1978). In the setting of chronic indwelling catheters in the SCI population, it accounts for 10 times more cases of bladder cancer, with an estimated incidence of 2% to 10% (Kaufman *et al*., 1977; Bejany *et al*., 1987; Kalisvaart *et al*., 2010 and Locke *et al*., 1985). SCC may arise primarily from the suprapubic cystotomy tract. Similar to primary SCC of the bladder, SCC of the suprapubic tract likely arises from chronic irritation and inflammation of the tract and surrounding skin (Feifer and Corcos, 2008). This was first described in the literature by Stoumbakis *et al*. (1993). They presented a patient who required suprapubic catheterization for urethral strictures. Five years after the insertion, SCC was found at the

cystotomy site with extension into the abdominal wall, but no bladder involvement. Subsequent reports of isolated cases from 1995 to 2011 describe cases of SCC arising from the suprapubic tract in patients with SCIs and suprapubic catheters (Schaafsma et al., 1999). The average time from catheter placement to presentation was 31 years, which is in concordance with the typical time of presentation of SCC in the chronic indwelling catheter population.

Only 1 case demonstrated evidence of intravesical disease while another demonstrated extension, but not penetration of SCC into the detrusor muscle. Four cases were treated with wide excision and either partial or radical cystectomy, with or without neoadjuvant radiotherapy. Palliative radiotherapy was provided to the remaining patient who had positive nodal and metastatic disease on Chemotherapy (Ito *et al*., 2011). Surgical resection includes radical cystectomy, or, in appropriate candidates, partial cystectomy is the recommended management of SCC of the bladder with or without adjuvant radiotherapy (El-Sebaie *et al*., 2005). Role of neoadjuvant chemo radiotherapy is not well established. Due to the sporadic occurrence of primary SCC of the suprapubic tract, we can only extrapolate a similar treatment approach in this setting. No proper evidence in the literature regarding optimal urological follow-up of SCI patients with indwelling suprapubic catheters, certain studies have recommended annual cystoscopic surveillance with biopsies of highly suspicious intra-vesical lesions.

Conclusion

SCC of the suprapubic tract is a rare malignant presentation in patients with chronic suprapubic catheters. Based on the treatment of primary SCC of the bladder available in the literature, surgery and radiotherapy are the recommended treatment modalities for SCC of the suprapubic tract. A high index of suspicion for abnormal lesions arising from the suprapubic catheter site and differentiation from common granulomatous changes at the time of follow-up or catheter change would lead to earlier identification and treatment of the disease process.

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