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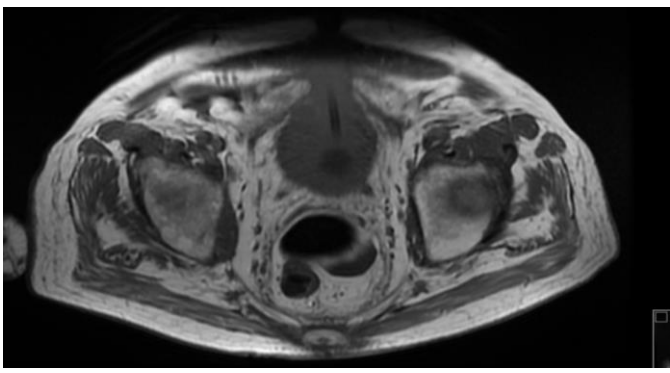
Adenocarcinoma of a suprapubic catheter (SPC) tract and a review of the literature: A case series

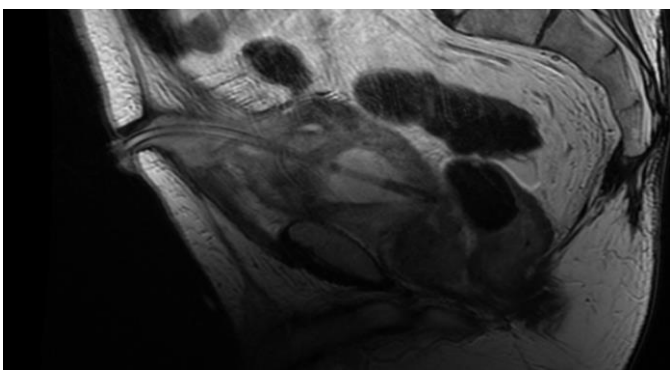
Background

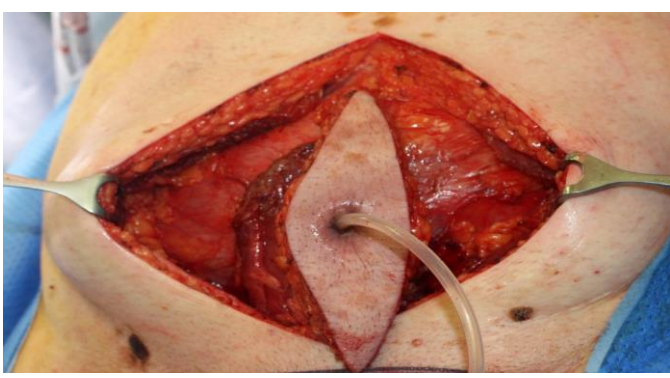
- Malignancies arising from a suprapubic catheter (SPC) site are rare, the most common being Squamous cell carcinomas.[1]
- There are only three previously reported cases on adenocarcinoma arising from the SPC tract in the current literature.[2-4]
- We present a three cases of carcinoma arising from the SPC tract being mucinous adenocarcinoma, squamous cell carcinoma and sarcoma with varying outcomes.

Case Studies

- **Patient 1 -** short history of bleeding from SPC site, SCI 42 years previously level C4/5. SPC inserted for management of neuropathic bladder. Cystoscopy of SPC tract and bladder revealed a small mass which was biopsied, histopathology confirmed adenocarcinoma of bladder origin. CTCAP and MRI pelvis demonstrated cancer arising from the SPC tract. Rapid progression over the four month period, with evidence of cancer invasion into the anterior abdominal wall and bladder lumen. An en-bloc resection including a cystoprostatectomy, anterior abdominal wall removal and removal of part of the sigmoid colon was performed, as at the time of surgery the cancer appeared to have spread to the sigmoid colon. Reconstruction with a colostomy, ileal conduit and closure of the wound with mesh and abdominoplasty. Histology demonstrated pT3bN0 adenocarcinoma, with surrounding cystitis glandularis and high grade glandular dysplasia.
- **Patient 2 -** 69 year old gentleman with an incomplete SCI at level T4, SPC present for more than 10 years for bladder management. Presented with a rapidly growing lump around his SPC tract. Imaging completed which demonstrated a thickened SPC tract, and some enlarged inguinal lymph nodes but no metastatic disease. An urgent cystoscopy and wedge biopsy of the SPC tract was performed within 2 weeks of the CT. This demonstrated malignant sarcoma , probably lieomysarcoma. He was referred urgently to the regional sarcoma unit, but due to the aggressive nature of his disease he died within three months of diagnosis.
- **Patient 3 –** 43 year old at diagnosis, C7 complete tetraplegic man due to a road traffic accident in 1996. His SPC was placed thirteen years prior to diagnosis. Routine cystoscopy and botox injection for his bladder; at the time of surgery a mass was biopsied from the SPC site. This demonstrated a SCC of the supra-pubic tract. Two weeks later he underwent a wide local excision and removal of the SPC tract. The histology from this confirmed a SCC arising from the SPC tract with negative margins. He had his SPC re-inserted six months later and is disease free and well eleven years later.







Results of Literature Review

Author / Year	Cancer Type	Age at Presentation	Male / Female	Spinal Cord Injury?	Management	Outcome
Gupta 2000	SCC	40	M	No	Surgical	3 month nil recurrence
Schaafsma 1999	SCC	63	M	Yes	Surgical	Patient died at 5 months but no recurrence
Hiroki 2011	SCC	58	M	Yes	Palliative Radiotherapy	Asymptomatic for 6 months
Chung 2012	SCC	56	M	No	Radiotherapy	Deceased, metastatic disease 4 months
Massaro 2014	SCC	55	M	Yes	Surgical	Recurrence within 1 year, palliated
Massaro 2014	SCC	85	F	No	Surgical	Metastatic disease following surgery – palliated
Zhang 2015	SCC	61	M	Yes	Radiotherapy	No recurrence at follow – unknown time
Boaz 2015	SCC	65	M	No	Surgical	No recurrence at 6 months
George 2011	SCC	78	M	No	-	-
Ranjan 2015	SCC	68	M	No	Radiotherapy	Died at 4 months due to progressive disease
Stroumbakis 1993	SCC	80	M	No	-	-
Bauman 2015	Adenocarcinoma	71	M	Yes	Surgical	No recurrence 5 years
Libo 2017	Adenocarcinoma	63	M	No	Surgical	No recurrence at 6 months
King 1997	Adenocarcinoma	68	M	Yes	-	-
Horn 2010	Prostate Cancer	64	M	No	Declined intervention	-
Tan 2010	Myeloid Sarcoma	70	F	No	Palliative Chemotherapy	-
Blake 1996	Verrucous Carcinoma	37	M	Yes	Surgical	No recurrence 20 months

Results

- 17 published case reports of patients with malignancy of the SPC tract
- Mean age = 64 years (37-85), male:female= 15:2, 8/17 of the cases had a SCI
- Squamous cell carcinoma N= 11, mucinous adenocarcinoma N= 3
- Management included
  - Wide Local Excision
  - Partial or full cystectomy
  - Abdominal wall excision and reconstruction with ileal conduit formation
- Longest reported recurrence free length being 5 years
- Three patients were palliated at the time of diagnosis

Recommendations

Malignancies of the SPC tract are rare, however they tend to be aggressive leading to poor outcomes even after radical treatment. Increased suspicion and level of investigation is warranted for patients presenting with discharge or bleeding to the SPC tract or urethra to pre-empt progression to severe disease. Prompt diagnosis and management is likely to afford better outcomes.

Referrences

1. Dadhania V, Czerniak B, Guo CC. Adenocarcinoma of the urinary bladder. *Am j Clin Exp Urol*. 2015;3(2):51-63
2. Bauman TM, Potretzke AM, Brandes SB, Potretzke TA, Siegal CL. Mucinous adenocarcinoma of the bladder associated with long term suprapubic tube: A case report. *BMC Urology.* 2015;15(1)119
3. King DH *et al.* Mucinous adenocarcinoma arising from a suprapubic cystostomy site without bladder involvement. *The journal of spinal cord medicine.* 1997;20(2):244-246
4. Libo M, Gui-Zhong L. Mucinous Adenocarcinoma of the suprapubic cystostomy tract without bladder involvement. *Urology Journal.* 2017;14(4):4048-4051