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## Unilateral Cutaneous Ureterostomy: A Feasible Urinary Diversion Option Following Radical Cystectomy

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**Abstract:** We report a case of 27 year old male with history of exstrophy of bladder and epispadias, diagnosed with muscle invasive urothelial cell carcinoma of urinary bladder. He underwent radical cystectomy with resection of apparently involved part of sigmoid colon. Unilateral cutaneous ureterostomy was done on the right side with dilated ureters. Patient had an uneventful post-operative recovery.

**Keywords:** exstrophy, bladder, epispadias

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### INTRODUCTION

Carcinoma bladder is one of the most common urinary tract malignancies in India. Radical cystectomy remains the gold standard for localized muscle invasive bladder tumor. Use of intestinal conduit gives a long term solution for urinary diversion but it comes with its own set of morbidities [1].

Cutaneous ureterostomy offers an alternative for traditional intestinal conduits and have the advantage of reduced surgical trauma, early return to activities and no bowel related complications [2].

In this case we present such a case where unilateral cutaneous ureterostomy was done following radical cystectomy in a patient with history of exstrophy of bladder with epispadias.

### CASE REPORT

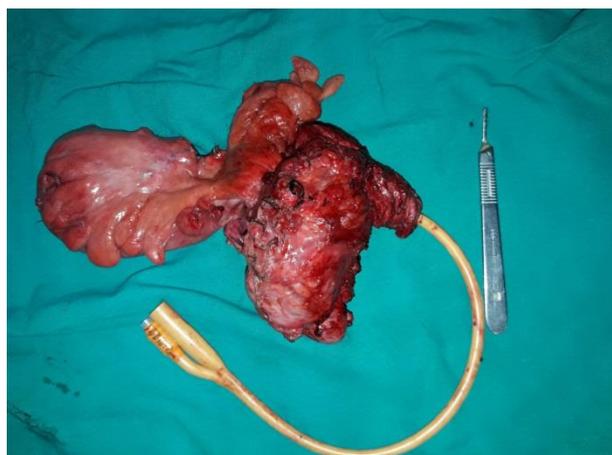
A 27 year old male presented with complains of hematuria for 5 months. He was operated for epispadias and exstrophy of bladder at the age of 5 years. Correction of epispadias was not achieved. On examination had a bifid glans with urethral opening at pubo-penile junction.



**Fig-1: preoperative picture with bifid penis and epispadias**

On USG KUB, a bladder tumor was found with bilateral hydronephrosis. He underwent TURB, histopathology revealing high grade muscle invasive tumor with squamous metaplasia. He then received 6 cycles of neoadjuvant chemotherapy.

Radical cystectomy was done, during which a part of sigmoid colon was resected with the specimen which was infiltrated by the tumor, with Hartmann's procedure.



**Fig-2: specimen of radical cystectomy with segment of involved sigmoid colon**

Both ureters were seen grossly dilated and thick walled. Left ureter was brought behind the sigmoid colon to the right side. Both ureters were spatulated and anastomosed with each other leaving one ureterostomy opening which was brought to skin surface on right side.



**Fig-3: unilateral cutaneous ureterostomy with end sigmoid colostomy**

Patient had an uneventful postoperative recovery with early ambulation. The histopathological report came out to be high grade urothelial cell carcinoma with squamous differentiation.

No ureterostomy related complication like collapse, end necrosis, UTI, fistula was seen till 6 months follow up

## DISCUSSION

Exstrophy of bladder has significant malignant potential [3]. Adenocarcinoma constitutes the majority of tumors in these patients and radical cystectomy is the standard of care for muscle invasive tumors [3]. The post-operative complications of radical cystectomy with intestinal conduits are well known like gastrointestinal complications (anastomotic leak, intestinal obstruction, delayed return of bowel function, metabolic complications), prolonged hospital stay, deep vein thrombosis, wound complications, erectile dysfunction etc [2].

While patients with exstrophy have early incidence of carcinoma bladder (4<sup>th</sup> to 5<sup>th</sup> decade), its common occurrence in normal population is in 6<sup>th</sup> decade [4], with majority of patients with poor nutrition status, multiple comorbidities, known smokers, early postoperative period is crowded with complications with prolonged hospital stay and delayed return to work. Cutaneous ureterostomy offers the advantage of shorter intraoperative time, less blood loss, quicker post-operative recovery, absence of intestinal complications, metabolic complications and a smaller stoma convenient for self care [5]. However, both early and long term complications of cutaneous ureterostomy is available in literature including stoma necrosis, atrophy collapse, urinary tract infections, hydronephrosis [6]. This makes this procedure a suitable option for morbid patients with relatively shorter life expectancy. However, the jury on long term complications is still not out and the actual incidence of ureteral stoma complications is yet to be found. This is due to selection bias choosing patients with shorter life expectancy for cutaneous ureterostomy and inadequate complication reporting system.

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