

OUTCOME OF RADICAL CYSTECTOMY WITH URINARY DIVERSION AT NICRH, BANGLADESH

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Abstract

Introduction: Radical Cystectomy (RC) is an effective surgical procedure for muscle invasive bladder cancer (MIBC). 5 years disease free survival after RCs are PT2 - 81%, PT3a - 68%, PT3b - 47%, PT4a - 44% respectively, Stein et al, 2001[1]. In this study early surgical & oncological outcome have been assessed.

Patients & methods: A total of 24(N) patients underwent radical cystectomy with urinary diversion between December 2013 to June 2016. Age ranges from 41-69 years. Indications were T2HG for twenty cases and T1HG for four cases. Among the T1 tumours, one had early recurrence, one had numerous tumours and two had multiple tumours with concomitant CIS. Urinary diversion methods were: Orthotopic Ileal neobladder-1, Ileal conduit-20, Cutaneous Ureterostomy -3 (2 due to unhealthy mesentry with gut, 1 single kidney with poor general condition), For uretero-Ileal anaestomosis we used Bricker method in all cases.

Result: Mean OR time was 3:45 hours, blood loss average 350 ml, hospital stay after operation 9 days, enlarged pelvic lymph nodes were found in two cases. In follow up we found, stomal stenosis of cutaneous ureterostomy in 1 out of 3 cases, ileal conduit prolapse with para-stomal hernia in 1 out of 20 cases, stenosis at uretero-Ileal anastomosis in 1 pt. Distant recurrence occurred in two cases, one in Lt. Supraclavicular LN and another in sacrum near SI joint. No local recurrence was found in any case.

Conclusion: Our experience on RC and all the three types of UD are safe and effective for patient and encouraging for us.

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Introduction

Cystectomy necessitates reconstruction of lower UT. Bladder cancer is the most common reason, other reasons are pelvic exenteration for other malignancies, birth defects, trauma, neuro-urological disorders etc. Ureterosigmoidostomy was the first widely used

diversion using the anal sphincter for continence. App. 50 yrs experience with this approach defined a series of complications that guided subsequent surgical progress. Subsequent surgical advances have led to major improvements in both functional outcomes and health-related quality of life (HRQOL). Radical Cystectomy (RC) is an effective surgical procedure for muscle invasive bladder cancer (MIBC). Five years disease free survival after RCs are PT2 - 81%, PT3a - 68%, PT3b - 47%, PT4a - 44% respectively[1]. In this study early surgical & oncological outcome have been assessed. Both continent and incontinent diversions are available for urinary reconstruction after RC. Orthotopic neobladders optimally preserve body image, while continent cutaneous diversions represent a reasonable alternative. Ileal conduits represent the most commonly performed urinary diversion.

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Patients & methods: This study was conducted in the geneto-urinary oncology department of NIRCH. A total of 24(N) patients underwent radical cystectomy with urinary diversion between December 2013 to June 2016. Age ranges from 41-69 years. Indications were T2HG for twenty cases and T1HG for four cases. Among the T1 tumours, one had early recurrence, one had numerous tumours and two had multiple tumours with concomitant CIS. Urinary diversion methods were: Orthotopic Ileal neobladder-1, Ileal conduit-20, Cutaneous Ureterostomy -3 (2 due to unhealthy mesentry with gut, 1 single kidney with poor general

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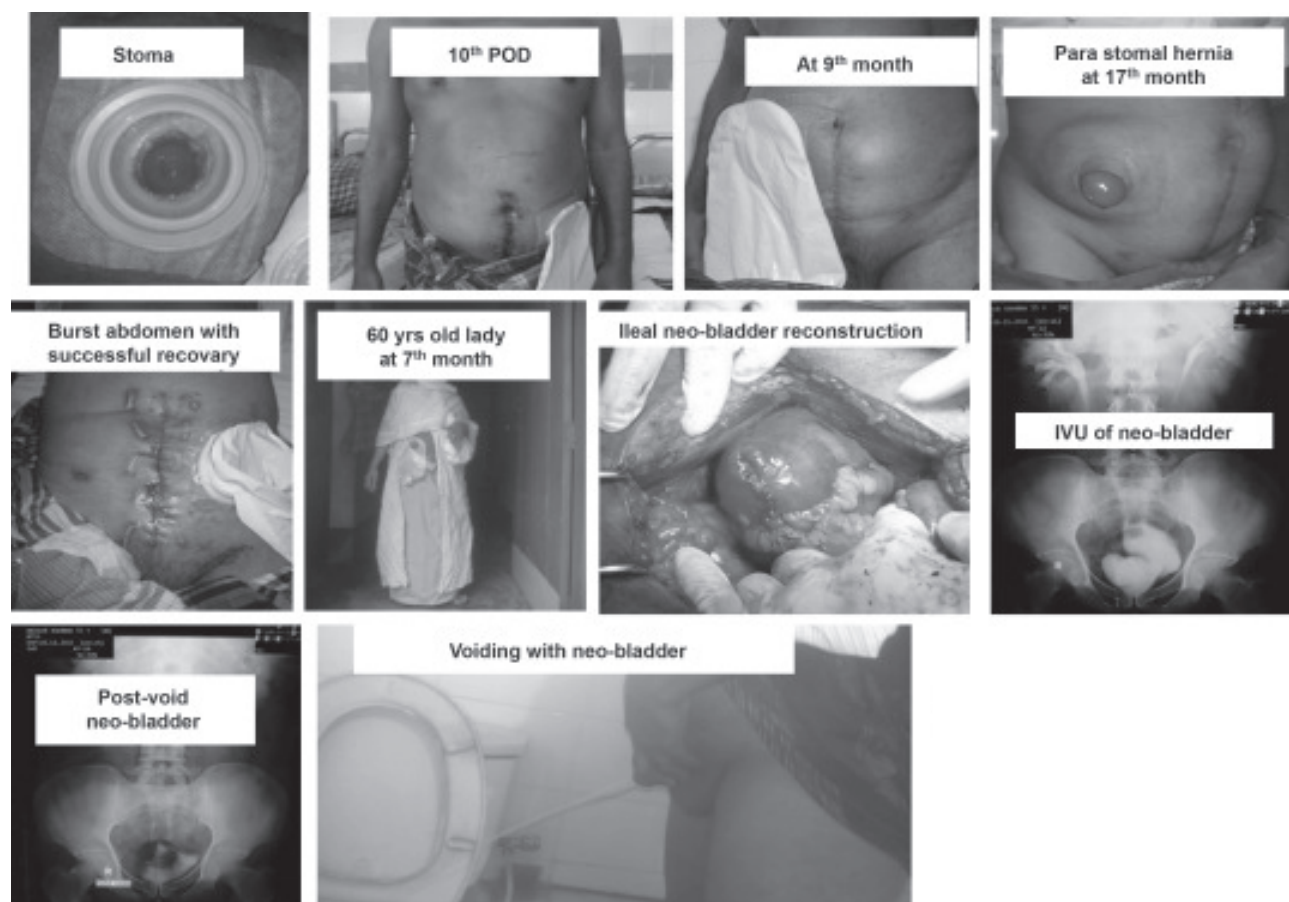


Figure: Surgical outcome at different stages

Table I
Patients characteristics

No(N)	M:F ratio	Age range	BMI	T Stage & Grade	PT Stage & Grade
24	3:1	41-69	17-41	T2HG-20 T1HG-04	T2HG-19 T1HG-04 T3aHG-01

Table-II
Issues affecting urinary diversion selection

Cancer control	General health	Technical	HRQOL
Risk of local recurrence	Functional status	Functioning urethra	Compliance
Previous pelvic radiation	Previous surgeries	Tumor location	Sexual function
Need for adjuvant therapy	Renal/hepatic function	Ability to Catheterize	Body image
Secondary malignancies	Medical co-morbidities	Mesentery length	Urinary function
Urethra or bladder neck involvement	Status of GI tract	Bowel condition	Family support

Table-III
Comparison of complications in ileal conduits vs continent diversions

Type of diversion	Reference	No. of patients	Time from surgery, months	% Complications
Ileal conduit	Pare kh et al.2000	81	19	22
	Gburek et al.1998[3]	66	20	18
	Madersbacher et al.2003[4]	131	98	66
	Salam et al. 2013	422	38	29
	NICRH 2016	24	28	20
Continent diversion	Shimogaki et al.1999	8	59.9	0
	Ali-el-dein et al.1999	60	20.2	13
	Hautmann et al.1999[5]	363	57	15.4-23.4
	Steven et al.2000	166	32	23.5-37.4
	Salam et al. 2011	154	48	36
	NICRH	1	June'15	0

Discussion:

The primary goal of RC is control of the underlying tumour. Risk factors for urethral recurrence after RC— multifocal disease, carcinoma in situ, upper tract urothelial carcinoma, and involvement of the bladder neck or prostatic urethra. The reported incidence of urethral recurrence after RC ranges from 0 to 18%, with a recent meta-analysis reporting 8.1% overall incidence. Most recurrences are detected >2 years after RC[2].

Factors Influencing Choice of diversion: The primary goals are lowest potential for complications and the highest HRQOL. The decision process is complex and involves consideration of issues related to cancer stage, patient co-morbidities, treatment needs, and patient desires related to HRQOL (Table 3). Elderly patients are usually offered primarily ileal conduits, whereas orthotopic neobladders tend to be reserved for younger, healthier patients. Recovery of continence after surgery may take longer in elderly pt. than in

younger patients. Age is an important determinant of long-term reservoir capacity, nocturia, and continence status in patients with ileal neobladders. While patient preference is important, absolute and relative contraindications for the use of various bowel segments and continent urinary reservoirs do exist. Patients should be informed that intra-operative findings may dictate a change in the planned form of urinary diversion, e.g. positive urethral margin precluding orthotopic diversion.

Diversion-related complications: In ileal conduit diversion, four most common complications reported are pyelonephritis, ureteric obstruction, urinary calculi and stomal complications. The frequency of complications increased over time from 45% at 5 years to 94% at 15 years. Continent urinary diversions involve multiple suture lines, valve mechanisms, tapered limbs, and longer operative times than ileal conduits. They are subject to a higher incidence of urinary leaks in the early postoperative period and may be subject to pouch rupture at any time.

Conclusion:

Our experience on RC and all the three types of UD are safe and effective for patient and encouraging for us. UD after RC, a complex process- every attempt to maximise HRQOL. Selection involves many different factors. More detailed analysis of HRQOL differences will require prospective studies with adequate baseline measures using validated instruments. The ideal urinary diversion should successfully preserve renal function while managing urinary outflow and minimizing morbidity to the patient. Much progress has been made in the field of urinary reconstruction since the introduction of uretero-sigmoidostomy. Newer urinary diversions are able to decrease the risk of secondary malignancy, provide continence, and preserve body image to a much greater extent. However, the quest for further improving urinary diversion should continue in an effort to benefit patients.

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