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Outcome Of Radical Cystectomy In Remote Area Of Pakistan: Recep Tayyip Erdogan Hospital, Muzaffargarh (IHHN)

Mazhar Ali¹, Muhammad Naqash², Kumail Sajjad³

1. Consultant urologist, head of department, Recep Tayyip Erdogan Hospital, Muzaffargarh
2. Medical Officer, department of urology, Recep Tayyip Erdogan Hospital, Muzaffargarh
3. Registrar, department of urology, LGH, Lahore

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Corresponding Author: Kumail Sajjad
Registrar, department of urology, LGH, Lahore
Email: mknaqvi@msn.com

ABSTRACT

Background: Radical cystectomy with bilateral pelvic lymphadenectomy is the standard treatment for high grade/ muscle invasive urinary bladder tumor. Continent or incontinent urinary diversion is the part of this major operation. High volume centers perform routinely but low volume centers do less frequent. It might be because of availability of equipment and trained surgeon in remote area of Pakistan.

Objectives: to assess the results of radical cystectomy at a low-volume center for high-grade muscle-invasive bladder tumours. For patients aged 50 to 75, this involves evaluating surgical complications, overall survival, and the absence of tumour recurrence throughout a one-year follow-up period.

Study design: A Retrospective Study

Duration and place of study: Recep Tayyip Erdogan hospital, Muzaffargarh from October 2018 to August 2022

Methods: total Cases from both genders and 50 to 75 years old with High grade/ Muscle invasive urinary bladder carcinoma, incomplete resection during TURBT due to high volume of mass (irresistible) included. Performa designed for collection of information. All the patients underwent same procedure by same urologist. Patients were followed for one year after surgery.

Results: All participants were followed for one year. 33.3% patients had paralytic ileus (CDC I), 13.3% had wound infection (CDC I) and 6.7% had urinary leakage (CDC IIIb). There was 86.6% overall survival rate. 6.7% lost to follow up. Mean operative time was 308 ±95 minutes. There was no recurrence noted throughout the study period.

Conclusion: Good operative results can also achieve at low volume centers. High level of surveillance and expertise help to achieve better outcomes in remote.

Keywords: cystectomy, radical cystectomy, bladder tumor, ileal conduit

Authors Contribution

MA. Concept & Design of Study and Drafting **MN.** Data Analysis and Critical Review, **MA,KS.** Final Approval of version

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INTRODUCTION

Bladder cancer is second most common genitourinary malignancy, with transitional cell our study was to determine the outcome in terms of Surgical carcinoma (TCC) comprising nearly 90% of all primary bladder tumors.(1-3) Worldwide, bladder cancer (BC) is the 11th most common diagnosed cancer (4, 5). 75% of patients with BC present with disease confined to the mucosa, submucosa superficial or carcinoma in situ (stage Ta, T1 or Tcis). In younger patients (< 40 years) this percentage is higher. Indications of radical cystectomy are patients with tumor from stage T2 to T4, surgically fit and willing for urinary diversion. It is the standard treatment for localised MIBC. Muscle invasive bladder cancer and continent urinary diversion (like ileal conduit) is the favored option for most patients (6-12). Radical cystectomy is not being performed in remote areas. The aim of Complications, and hospital stay. Results of this study will provide evidence that this major surgery can perform in remote area.

Material & Methods:

This was a retrospective study conducted in Recep Tayyip Erdogan hospital, Muzaffargarh from October 2018 to August 2022. Approval taken from Institutional review board of IHHN. Cases from both genders and 50 to 75 years old with high grade which are refractory to BCG/ Muscle invasive urinary bladder carcinoma included. Preoperative investigations included ultrasound kidney ureter bladder (KUB), CT/MRI with I/V contrast, Preop and postop hemoglobin level, Urine culture and sensitivity. Bowel prepared with Tab. Bisacodyl 5mg, 4 tablets \pm Kleen enema stat 24 hours before surgery. All patients kept nil per oral for 06

hours. Before that patients were on liquid diet for 24 hours. All the surgeries done by the same urologist under the general anesthesia. Postoperative specimen biopsy with number of lymph nodes evaluated. Hospital stay, operative time, recurrence and complication were primary outcome of this study. Patients shifted to ward or HDU immediately after surgery. Oral feed allowed after 24 hours postoperatively according to patient condition. Patients were followed post operatively for one year. Data analysis carried out using SPSS 26. Quantitative variable were age, operative time, hospital stay, measured in mean (\pm SD). Qualitative variable including post-operative complication, gender and resound kidney ureter bladder (imaging), CT/MRI reported in frequency and percentages.

Results:

Total 15 patients underwent radical cystectomy with ileal conduit with the follow up duration of one year. The majority of them were male 12(80%). Their mean age was 59 ± 14 years. According to clinical staging on the basis of radiologic investigation and hisopathology, 33.3% of patients were on cT1 high grade refractory to BCG and T2 each, followed by T3a 2(13.3%) and T4 2(13.3%) and only one patient was on T3b stage 1(6.7%). Mean preoperative hemoglobin was 11 ± 1 mg/dL. All the patient's bowel prepared before surgery (Table 1). Among all underwent same surgical Procedure, radical cystectomy with ileal conduit and bilateral pelvic lymphadenectomy. 11 (73.3%) patients lost < 1000ml of their blood during surgery as reported by anesthetist in perop notes. While, 8 (53.3%) patients required blood transfusion. Mean postop Hb 10 ± 1 mg/dl, Preop creatinine 1 ± 0 mg/dl, and postop creatinine was 1 ± 1 mg/dl. Mean operative time as 308 ± 95 minutes and length of hospital

stay (LOS) was 14 ± 7 days. Remarkably, half of the patients had no complications 7 (46.7%), While the only onepatient had urinary leakage 1(6.7%), wound infection in 2 (13.3%) and paralytic ileus in 5 (33.3%) patients. All the study participants followed for the one year after surgery. One patient died during this one year due to hospital acquired infection. One patient lost follow up during the study period. On specimen histopathology, 11 (73%) out of15 had transitional cell carcinoma (TCC), 2 (13.4%) had squamous cell carcinoma (SCC), and 2 (13.4%) had adenocarcinoma. Fischer exact test applied to check association of variables. It was also noted that no significant association found between postoperative complications and other variables.

Table 1 Characteristics of study participants

1. Gender	Number and percentage
	Male 12 (80%)
	Female 03 (20%)
2. Age	59 ± 14 years
3. Indication of surgery	T1 high grade 5 (33.3%) T2 5 (33.3%) T3a 2 (13.3%) T3b 1 (6.7%) T4 2 (13.3%)
4. Preop Hemoglobin	11 ± 1 mg/dL
5. Bowel preparation	15 (100%)
6. Surgical Procedure	Radical cystectomy with ileal conduit 15 (100%)

Table 2 Postoperative characteristics of study participants

Hemoglobin	10 ± 1 mg/dl
Creatinine	1 ± 1 mg/dl
Operative time	308 ± 95 minutes
NPO break	2 ± 1 days
Complications	
Urinary leakage (CDC IIIb)	1 (6.7%)
Wound infection (CDC I)	2 (13.3%)
Paralytic ileus (CDC)	5 (33.3%)
Hospital Stay	10 ± 7 days
One year survival	13 (86.6%)
DiedLost follow-up	1 (6.7%)
Recurrence in 1 year	0

*CDC- Clavien Dindo Classification system

Discussion:

High grade bladder tumor with or without muscle invasion is the concern of treatment. Radical cystectomy is the gold standard treatment but offered in less number of centers in the country. Ourstudy evaluated the results of single center in remotearea. Patients included in this study were equal in age and gender distribution as in other studies conducted in Pakistan. High grade bladder tumor patients with any clinical stage counseled for radical cystectomy. Pre op investigations ensured the patients fitness and clinical stage of disease. Pathological staging also done. Hemoglobin of all participants was 11 ± 1 mg/dL preoperatively (1,5,13). Postoperative clinical outcome of our studyare comparable despite of the single effort by an individual urologist working in remote area. Preoperative hemoglobin is related to perioperative

complications. There was mean 1 mg/dl drop in hemoglobin of patients which was same as in other studies (14,15). Operative time of radical cystectomy was equal to Vlad et. al., but Nunzio et. al., done in less time (15,16). Complications were classified according to Clavien dindo classification system. 46.6% complications were from class I which is greater but on the other side class III complications were 6.7%. No one observed in class IV and V. Length of hospital stay was little bit more than few studies. Our complication rate was less than other studies. (5,17,18,19). The one year survival rate was 86.6% in our study while Coughlin et. al., noted 83%. Studies state high volume centers have less complications (20). Results of our low volume center are comparable with high volume centers. Progression and muscle invasion effectively treated with radical cystectomy.

Conclusion:

Finding of our study results can also achieve at low volume centers. High level of surveillance and expertise help to achieve better outcomes in remote.

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