



OUTCOME OF OPEN RADICAL CYSTECTOMY AND ILEAL CONDUIT: OUR INSTITUTIONAL EXPERIENCE.

Urology

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ABSTRACT

The standard treatment for muscle invasive and high grade, non-muscle invasive bladder cancers, refractory to intravesical immunotherapy or chemotherapy, has been open radical cystectomy in males and anterior exenteration in females, coupled with en bloc bilateral pelvic lymphadenectomy (1-3). Radical cystectomy provides accurate staging information, which is the key for decision regarding adjuvant treatment options. Traditionally, radical cystectomy has been associated with significant morbidity and mortality. However, due to improvements in surgical techniques, anaesthesia techniques, and perioperative intensive care and monitoring, the mortality and morbidity of open radical cystectomy has been drastically reduced.

KEYWORDS

INTRODUCTION -

The standard treatment for muscle invasive and high grade, non-muscle invasive bladder cancers, refractory to intravesical immunotherapy or chemotherapy, has been open radical cystectomy in males and anterior exenteration in females, coupled with en bloc bilateral pelvic lymphadenectomy. [1-3] Radical cystectomy provides accurate staging information, which is the key for decision regarding adjuvant treatment options, while staging by clinical means is associated with up to 30% staging error. Traditionally, radical cystectomy has been associated with significant morbidity and mortality. However, due to improvements in surgical techniques, anaesthesia techniques, and perioperative intensive care and monitoring, the mortality and morbidity of open radical cystectomy have been reduced to 1-3% and 25-35%, respectively, in the recently published series. (1-6) In the present study we have reviewed our long term surgical experience and clinical outcomes in a group of patients treated with radical cystectomy and ileal conduit for muscle invasive bladder cancer or superficial cancer refractory to intravesical chemotherapy.

PATIENTS AND METHODS -

Between January 2019 to March 2022, 26 patients who underwent open radical cystectomy and ileal conduit for urinary bladder malignancy were included in this study.

Data regarding patient's demographic profiles, perioperative outcomes, histopathological results and follow up were recorded.

The indications for radical cystectomy included muscle invasive bladder cancer detected by transurethral resection or high grade stage Ta, T1 or carcinoma in situ, refractory to repeat transurethral resection and intravesical immunotherapy or chemotherapy. The patients with metastatic disease were excluded.

The surgery was performed with en bloc excision of the bladder, prostate, and seminal vesicles in males and en bloc excision of uterus, ovaries, and anterior vagina in females. Ileal conduit was prepared with 10-15cms segment of terminal ileum. Bilateral standard pelvic lymph node dissection was performed in all cases with the following boundaries: cranially - bifurcation of the common iliac artery; caudally - lymph node of cloquet and laterally - genitofemoral nerve, including the obturator lymph nodes.

The lymph nodes were sent separately for histopathological examination. Adjuvant chemotherapy was used in patients with pathological stage $\geq$ T3b and/or lymph node involvement. Regimens consisted of methotrexate (M), vinblastine (V), doxorubicin (A) and

cisplatin (C) or CMV or gemcitabine and cisplatin. Adjuvant radiotherapy was used in patients with at least one broad base tumor and in patients with positive lymph nodes.

Any complications occurring within first month postoperatively were considered as early morbidity and after 1 month as delayed morbidity.

Postoperatively, the patients were followed up every three months for the first two years. During each visit, detailed history, physical examination, routine blood tests, chest X-ray and urine cytology were performed. An abdominopelvic, contrast enhanced computed tomography was performed biannually.

RESULTS -

Total 26 patients included in the study.

Median age was 59.4 years with the range from 45 to 70 years.

Out of 26, 25 were male & 1 was female.

Gender	No. of Patients (%)
Male	25 (96%)
Female	1 (4%)

Most common mode of presentation was haematuria seen 20 patients. Left posterolateral was the most common site of involvement.

Presenting Symptoms	No. of Patients (%)
Hematuria	20 (77%)
Irritative LUTS	6 (23%)

Smoking is strongly associated with carcinoma urinary bladder.

Smoker	15 (58%)
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Most common histological variant was transitional cell carcinoma.

HISTOLOGICAL TYPE	No. of Patients
Transitional cell carcinoma	24 (92%)
Poorly differentiated carcinoma	2 (8%)

Most common stage of presentation was stage II (16).

PATHOLOGICAL STAGING	No. of Patients
Stage I	4 (15%)
Stage II	16 (61%)
Stage III	6 (24%)
Stage IV	Nil

Perioperative mortality was not seen in any patient. Most common early morbidity was ileus seen in 6 (23%) patients, followed by wound infection seen in 5 (19%) patients.

Early Complications	No. of Patients
Ileus	6(23%)
Wound infection	5(19%)
Pneumonia	2(8%)
Wound Dehiscence	2(8%)
Faecal leak	1(4%)

Most common delayed morbidity was hydronephrosis seen in 2 patients.

Delayed Complication	No. of Patients
Hydronephrosis	2
Subacute bowel obstruction	1
Pyelonephritis	1
Incisional hernia	1

DISCUSSION -

Bladder cancer is the second most common genitourinary malignancy with transitional cell carcinoma (TCC) comprising nearly 90% of primary bladder tumors. The invasive variety if not handled with extreme care it is usually fatal (7). The aim of the treatment for any invasive bladder cancer should include long term survival, prevention of pelvic recurrence or development of metastatic disease better quality of life. During the past 40 years, radical cystectomy with en bloc pelvic lymphadenectomy has emerged as a gold standard for patients with high grade muscle invasive bladder cancer. Initially, there was lack of universal acceptance of this procedure because of high morbidity. With better understanding of the pathophysiology of bladder cancer, early diagnosis, improvement in pre and postoperative care, advances in surgical and anaesthetic techniques and adjuvant chemotherapy, the outcome of radical cystectomy has become better and acceptable, both to the surgeon and the patient. It has now become a common surgical procedure in the armamentarium of the urologist. And mortality and need for urinary diversion, which was not acceptable to most of the patients and this procedure was done only in few centers. After adequate preoperative assessment and optimization of the patient, radical cystectomy is a safe procedure in all age groups and should not be denied to extreme age patients with good performance status. Certain comorbidities which were earlier considered as limitation for surgery can now be optimized and with preoperative correction. Thus with adequate measures and correction surgery has become safe option in these patients.

Perioperative mortality was nil in our study when compared to 2 - 3% in most of previous studies.

Thus, due to strict attention to preoperative preparation, meticulous surgery, and a team oriented surgical and postoperative approach, we have performed radical cystectomy and ileal conduit without perioperative mortality and acceptable morbidity.

CONCLUSION -

Over a period of time with better preoperative, operative and postoperative management, our perioperative mortality has decreased considerably and is being offered to significant subset of population belonging to western Rajasthan.

However, the morbidity of radical cystectomy and ileal conduit still remains substantial requiring prolonged hospitalisation and management.

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