Case Report

DOI: 10.4274/uob.galenos.2020.1645

*Bull Urooncol 2022;21(1):24-27*

# *Partial Cystectomy in Patients with Huge Bladder Mass Who are Unfit for Curative Surgery: Case Presentation and Literature Review*

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**Abstract**

Bladder cancer (BC) is a common genitourinary malignancy among the advanced age population. BC with non-metastatic muscle-invasive diseases requires neoadjuvant chemotherapy followed by radical cystectomy or bladder-sparing approach with systemic chemotherapy plus definitive radiation therapy. Patients with advanced age are the fastest-growing segment of the population worldwide. Age itself is not a disease; however, elderly patients with reduced functional organ reserve are more sensitive to any medical stress factor. Therefore, patients may lose their chance of getting chemotherapy, radiotherapy, and surgical treatment. This case series aimed to examine the approach to patients who lost the chance of transurethral bladder mass resection in a single session.

**Keywords:** Bladder cancer, partial cystectomy, quality of life

## Introduction

Bladder cancer (BC) is the second most common genitourinary malignancy, especially in the advanced age population (1). At the initial presentation, 25% of BCs are either invasive or metastatic (2). BC with the non-metastatic muscle-invasive disease requires neoadjuvant chemotherapy followed by radical cystectomy or bladder-sparing approach with systemic chemotherapy plus definitive radiation therapy.

Patients with advanced age are the fastest-growing segment of the population worldwide. Age itself is not a disease; however, elderly patients with reduced functional organ reserve are more sensitive to any medical stress factor (3). Therefore, patients may lose their chance of getting chemotherapy, radiotherapy, and surgical treatment. In this case series after obtaining the written consent of the patients, we tried to examine the approach to patients who lost the chance of transurethral resection of the bladder mass in a single session.

## Case Reports

### Case 1

An 80-year-old female patient presented with a 2-month history of total incontinence and an incomplete voiding sensation, as well as dysuria, loin, and intermittent flank pain. Physical examination was unremarkable. She had a history of hypertension from a cerebrovascular event. Urine culture detected extended-spectrum beta-lactamase-positive *Escherichia coli*, which was treated with culture-directed antibiotics, and repeat culture was sterile. Blood studies including complete blood count (CBC), urea, and electrolytes showed mild anemia. Urinary ultrasonography (USG) revealed a huge mass within the bladder lumen and bilateral grade two hydroureteronephrosis. Pelvic magnetic resonance imaging (MRI) revealed a giant mass of 11×11×11 cm that filled the bladder lumen with bilateral hydronephrosis (Figure 1a).

At first, cystoscopy was done at which a vegetating mass with right anterolaterally located at the base that fills the bladder lumen was seen. Then the operative management of partial cystectomy (PC) was performed for the quality of life (Figure 1b). Histopathological examination of the mass, which was 20×18 cm, revealed undifferentiated pleomorphic sarcoma (Figure 1c).The patient's voiding complaints improved soon after the operation. The patient was followed up after her discharge, and 3 months later the patient applied to our clinic with a complaint of urinary leakage from her suprapubic incision scar (Figure 1d). A new mass of approximately 10 cm in size in the bladder cavity was seen at the cystoscopic examination.The

**Cite this article as:** Girgin R, Mungan NA. Partial Cystectomy in Patients with Huge Bladder Mass Who are Unfit for Curative Surgery: Case Presentation and Literature Review. Bull Urooncol 2022;21(1):24-27

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**Received:** 10.02.2020 **Accepted:** 04.06.2020

patient died 5 months later because of acute renal failure due to postrenal obstruction secondary to recurrent tumor burden.

## Case 2

A 77-year-old male patient presented with unbearable lower urinary tract symptoms and hematuria. Physical examination was unremarkable. He had a history of urothelial cancer without regular follow-up. The urine culture was sterile. CBC, urea, and electrolytes were normal. Urinary USG revealed a huge mass within the bladder lumen. Pelvic MRI revealed a giant heterogeneous mass lesion of 15×16×13 cm that filled the bladder lumen that could not be distinguished from the right iliac artery and the rectus muscles were observed (Figure 2a).

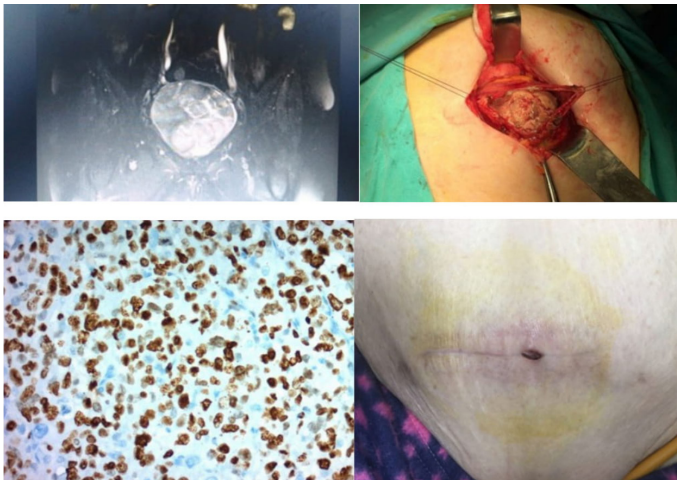

**Figure 1a**. Magnetic resonance imaging of the mass, **1b.** Mass in the bladder, **1c.** Anti-Ki-67 antibody (30-9, Ventana, USA; ×20) positivity in over 75% of tumor cells, 1d. Fistula to suprapubic incision scar

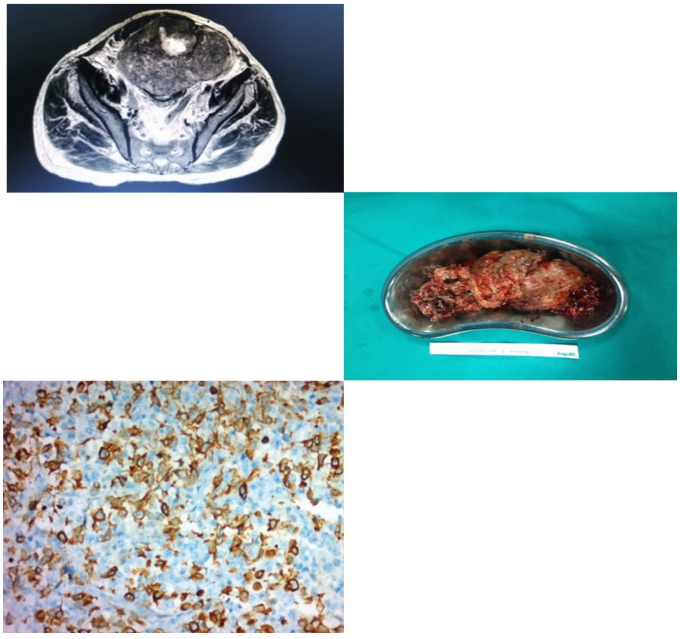

**Figure 2a**. Magnetic resonance imaging of the mass, **2b.** Removed mass, **2c.** Anti-cytokeratin positivity in atypical cells (AE1/AE3, Genemed, USA; 1/50×20)

The patient's preoperative risk of anesthesia was high because of pulmonary complaints. Thus, cystoscopy was done first, where a vegetating mass with an apically located base that fills the bladder lumen was seen. Then, the operative management of PC was performed for the quality of life (Figure 2b).

Histopathological examination revealed a malign epithelial tumor, which is highly active and observed immunohistochemically and histomorphological epithelial (Figure 2c). The material consists only of tumor tissue. The healthy tissue from the bladder that will clarify the localization was undetected despite numerous samples. However, the primary source of the mass was the bladder wall when the localization of the removed material was considered. Patient complaints were regressed in the early postoperative period; however, after 9 months, the patient died because of respiratory failure due to pneumonia.

## Case 3

A 72-year-old male patient presented with lower urinary tract symptoms and hematuria. He had a ruptured urethra from a traffic accident in 1967. Thereafter, several endoscopic procedures were applied due to urethral stricture. The last operation was 3 years ago. Since that date, he had a history

**Figure 3a**. Computed tomography image of the mass, **3b.** Removed mass

of hematuria without follow-up. He had been undergoing dialysis for 3 days a week for 10 years and was followed up in the endocrinology department due to hypothyroidism for 3 years. His cardiac ejection fraction was 30%, with simultaneous chronic lung disease. Physical examination was unremarkable. The urine culture was sterile. CBC, urea, and electrolytes were normal. Urinary USG revealed a huge mass within the bladder lumen. Abdominal computed tomography revealed a giant heterogeneous mass lesion of 8×8×10 cm that filled the bladder lumen without other pathological findings outside the bladder (Figure 3a).

The patient's preoperative risk of anesthesia was high due to comorbidities. At cystoscopy, a vegetating mass with a left-sided base fills the bladder lumen. Then the operative management of PC was performed for the quality of life (Figure 3b).

Histopathological examination revealed infiltrative urothelial carcinoma. The World Health Organization Quality of Life Brief Version (1998) form was filled by the patient before the operation and at the appropriate postoperative period to evaluate his general health status, physical, psychological health, and social and environmental relations. The answers revealed that general, physical, and psychological health status improved by 50%, 7%, and 16%, respectively. However, changes were not seen among his social and environmental relations. Additionally, after 9 months of follow-up, the patient died because of renal and heart failure. None of the cases had distant organ metastases.

### Discussion

Surgical indications for bladder tumors have been well defined nowadays (4,5,6). As emphasized, the overall health status of the patient must be well assessed before the treatment decisions for patients with bladder tumors (7). Miller et al. (7) found an association between comorbidity and adverse pathological and survival outcomes following RC in their study. Similarly, Extermann et al. (8) reported difference in the impact of performance status and comorbidity on treatment outcomes and have suggested independently evaluating these parameters. Our cases revealed that patients were not suitable for chemoradiotherapy and were at high risk for surgery. The urinary tract symptoms were unbearable for these patients, and removing the masses in a single session transurethrally was impossible. The tumor recurred shortly afterward and all patients died after PC. In all cases, comorbidities reduce the tolerance for radical surgery, limiting daily activities that could prevent taking the chemoradiotherapy arm of the organ-preserving treatment strategy and increasing the risks of anesthesia. Therefore, extracting the mass by PC without taking pathological specimens from the existing masses was decided to avoid additional anesthetic burden to the patient. Patients' lower urinary tract complaints had subsided shortly after surgery. However, tumor recurrence was observed 3 months later in the first case and 5 months later in the second and third cases. The first patient died at 5 months, and the second and third patients at the 9-month follow-up. The local recurrences and patient deaths in a short period led us to question our treatment approaches. Hamilton et al. (9) revealed that patients significantly benefited from palliative surgery despite the perioperative complication rates. As the patients' quality of life improved, their future hopes have also increased (9). Therefore, they reported that patients benefited physically and mentally from a palliative surgery although morbidity and mortality were high (9). Our patients also had low morbidity and improved quality of life until death.

The primary goal in cancer surgery is increasing the life span despite its diagnostic, curative, and palliative purpose. The increasing importance of the concept of quality of life has necessitated a change in surgical approaches. Palliative surgical approaches to improve symptom control and improve quality of life have come to light in patients who have missed the chance of curative surgery (10). Cancer surgery completely cleans the tumor cells, and its principles are certain. However, literature on palliative surgery is limited, and knowledge about the indication, purpose, risks, and benefits of palliative surgery is still insufficient. In palliative surgery, the surgeon must use their clinical knowledge and experience to have greater expected treatment benefits than risks and harms. Moreover, the surgeon should inform patients and their relatives in detail about the results of this palliative surgery in improving the quality of life.

## Acknowledgements

**Publication:** The results of the study were not published in full or in part in form of abstracts.

**Contribution:** There is not any contributors who may not be listed as authors.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study received no financial support.

### Ethics

**Informed Consent:** Obtained the written consent of the patients.

**Peer-review:** Externally peer-reviewed.

### Authorship Contributions

Supervision: N.A.M., Concept: N.A.M., Design: R.G., N.A.M., Data Collection or Processing: R.G., Analysis or Interpretation: R.G., Literature Search: R.G., Writing: R.G.

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