



Received on 25 July, 2011; received in revised form 01 August, 2011; accepted 29 September, 2011

## ADVANCED INOPERABLE URINARY BLADDER ADENOCARCINOMA: A CASE REPORT

Mukesh K. Bharti\*, Ashok Chauhan, Paramjeet Kaur and Ramesh Sabharwal

Department of Radiation Oncology, Regional Cancer Centre, Pt. B. D. S. PGIMS, Rohtak, Haryana, India

### ABSTRACT

#### Keywords:

Adenocarcinoma,  
Urinary bladder,  
Inoperable,  
Advanced

#### Correspondence to Author:

**Dr. Mukesh Kumar Bharti**

Senior Resident, Department of  
Radiation Oncology, Regional Cancer  
Centre, Pt. B. D. S. PGIMS, Rohtak,  
Haryana, India

**Aim:** Primary urinary bladder adenocarcinoma is a rare entity. This is a clinical case presentation with review of the literature on this topic. Primary adenocarcinoma of the urinary bladder has shown a poor response to radiation or chemotherapy individually. Therefore, combination chemotherapy with radical EBRT is the effective therapeutic approach for inoperable cases.

**Method:** A 58 year old male patient referred to the department of Radiotherapy, Regional Cancer Centre, Pt. BDS PGIMS ROHTAK with complaints of gross painless hematuria, dysuria, burning micturation for 5 years. Diagnostic work-up included renal and bladder ultrasound, cystoscopy and CT scan of abdomen and pelvis. CT scan showed mass lesion in urinary bladder infiltrating anterior abdominal wall (primary bladder adenocarcinoma T4bN0M0). Trans-urethral resection followed by tissue diagnosis revealed an invasive adenocarcinoma. Metastatic disease was ruled out. Patient responded completely to systemic combination chemotherapy including GEMCITABINE and CARBOPLATIN six courses followed by radical external radiotherapy. At 24 months of follow-up, the patient did not present disease progression or systemic complications, after that he developed a nodular lump in neck. FNAC of node showed metastatic high grade carcinoma, for that he received palliative RT and six courses of CT with Paclitaxel, Cisplatin & Methotrexate, now patient is in complete response.

**Conclusion:** Primary bladder adenocarcinoma is rare. Unlike urothelial carcinoma, it responds poorly to chemotherapy or radiotherapy individually. Combination chemotherapy with Radical EBRT offers the best chance of long-term survival to those where surgery is not feasible.

**INTRODUCTION:** Primary adenocarcinoma of the urinary bladder accounts for only 0.5–2% of all cases of bladder cancer <sup>1</sup> and represents less than 3% of invasive bladder tumors <sup>2</sup>. This neoplasm may be of urothelial or urachal origin with intravesical extension <sup>2</sup>. Primary adenocarcinoma of the urinary bladder has shown a poor response to radiation or chemotherapy individually. Therefore, combination chemotherapy with radical EBRT is the effective therapeutic approach for inoperable cases.

**Case Report:** A 58-year-old male, chronic smoker was referred to the Department of Radiotherapy, Regional Cancer Centre, Pt. B.D.S. PGIMS ROHTAK with complaints of gross painless hematuria, dysuria, burning micturation for 5 years.

Cystoscopy revealed a solid, non-papillary, broad-based tumor arising from anterior wall of the urinary bladder, size 5×6 cm with calcification.

CECT Scan Whole Abdomen revealed 47×52×60 mm sized irregular heterogeneous mass lesion, involving antero- superior bladder wall. The mass is bulging both intra and extravasically involving perivesical fat plane with small focus of fat plane loss between mass and abdominal wall. Muscle calcification was noted within mass lesion and findings were suggestive of TNM staging T4bN0M0.

Trans Urethral Biopsy of growth on anterior wall of urinary bladder yielded tissue consistent with a poorly differentiated adenocarcinoma infiltrating the smooth muscles of the bladder wall.

Abdominal computed tomography (CT) with non papillary projection (Fig. 1: a, b & c).



a



b



c

Fig. 1(a, b, c): ABDOMINAL COMPUTED TOMOGRAPHY (CT) WITH NON PAPILLARY PROJECTION

**Local Examination:** Per Abdomen –soft, 4×4 cm hard, fixed lump on suprapubic region which is non tender on palpation.

**Lymph Node:** No Lap

**Diagnosis:** Ca Urinary Bladder, T4bN0M0, Stage IV

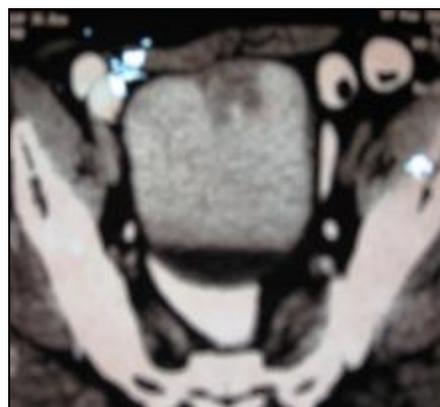
**Treatment Plan:** The patient was treated with the combination chemotherapy consisting of Gemcitabine and Carboplatin (Table 1), based on previous reports<sup>3, 4, 5, 6</sup>.

TABLE 1: REGIMEN OF CHEMOTHERAPY

Drug	Dose	Method	Time
Carboplatin	450 mg	IV	Day 1
Gemcitabine	1.4 gm	IV	Day 1 & Day 8

\*Treatment course was repeated every 3 weekly. IV-intravenous

The patient tolerated chemotherapy well except for mild nausea and leukocytopenia. After four courses of combination chemotherapy, CT (Fig. 2a & b) showed a marked regression of the primary tumor of the urinary bladder.



a



b

FIG. 2a, b: CT SCAN AFTER FOUR COURSES OF CCT

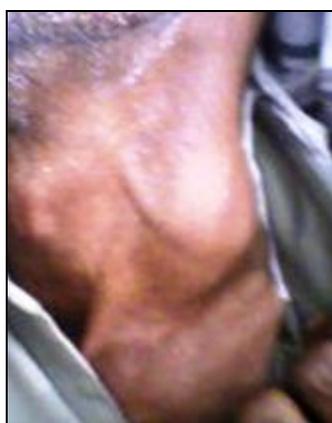
Then patient was planned for Radical External Beam Radiotherapy with Dose 60 Gy/30Fr/6Weeks by AP-PA parallel opposed fields to pelvis in supine position on Theratron 780E, Telecobalt machine.

Patient was replanned by shrinking field technique after 22 fractions. He developed Grade II skin radiation reaction in last week of completion of RT.

Subsequently, radiologically, no viable tumor was detected. The patient had no other specific early or late post treatment complications. The patient remained disease-free for 2 years after regular every 3 months follow up on outpatient basis. After that he complained a nodular lump in left lower neck with mild pain (**Fig. 3a & b**).



a



b

#### Local Examination:

- At primary site suprapubic region - Normal
- **LAP**- A 5×6 cm hard fixed, single non tender lymph node at level IV Left Side of neck
- Another 3×2 cm single node at level I on same side

- **FNAC of involved lymph node** showed cytological features suggestive of high grade carcinoma
- **X ray Chest** PA view was normal
- **Ultra sonogram of whole abdomen** showed - liver size 16 cm with multiple hypoechoic lesions seen in both lobes of liver?? Metastasis
- Prostate size was -4.05 × 2.67 × 3 cm

**Treatment** - Palliative RT 800 cGy single session to neck node was given by AP-PA Field.

After 2 weeks patient received 2nd line combination salvage chemotherapy with Paclitaxel, Cisplatin and Methotrexate as follows-

**TABLE 2: REGIMEN OF CHEMOTHERAPY**

Drug	Dose	Method	Time
Paclitaxel	260 mg	IV	Day 1
Cisplatin	100 mg	IV	Day 1
Methotrexate	50 mg	IV	Day1

Each cycle was repeated every 3weekly. After 4 courses patient's neck node was completely regressed and he further received 2 more courses of chemotherapy. Now patient is in complete response.

**DISCUSSION:** Adenocarcinoma has been reported to have a clinical behavior similar to that of transitional cell carcinoma (TCC) in the urinary bladder<sup>6</sup>. However, many adenocarcinomas are generally invasive at presentation, which often makes them unresectable, and are resistant to radiation therapy and also chemotherapy<sup>11</sup>. These results in a poorer prognosis compared to TCC<sup>7</sup>. External radiotherapy for non-resectable adenocarcinomas has not significantly affected long-term survival<sup>8</sup>.

Chemotherapy has been used only sporadically and in general has not been useful. However, there have been various reports on the use of 5-FU with or without other modalities in the treatment of adenocarcinoma of the urinary bladder.

Logothetis *et al.*, reported eight patients with unresectable adenocarcinoma of the urinary bladder who were treated primarily with systemic chemotherapy<sup>9</sup>.

All eight patients received doxorubicin hydrochloride, MMC and 5-FU (DMF), with one complete and four partial responses.

Nevin *et al.*, reported 30 patients with Stage C or D1 bladder cancer of various histological types. All of these patients were treated with radiation either before or after intra-arterial 5-FU infusion. Some of the patients were given bleomycin with or without doxorubicin hydrochloride. Three of the four patients with adenocarcinoma had an excellent response.

Therefore, most sensitive anticancer drugs for combination chemotherapy were selected. However, combination chemotherapy with radical radiotherapy as 1<sup>st</sup> line treatment for adenocarcinoma of the urinary bladder has not been reported previously.

It is clear that the treatment of advanced NON - RESECTABLE adenocarcinoma of the urinary bladder by this combination chemotherapy and radiotherapy is of benefit.

**CONCLUSION:** Primary bladder adenocarcinoma is rare. Unlike urothelial carcinoma, it responds poorly to chemotherapy or radiotherapy individually.

Combination chemotherapy with Radical EBRT offers the best chance of long-term survival to those where surgery is not feasible. More comprehensive studies involving great numbers of patients with adenocarcinoma of the urinary bladder treated by

combination chemotherapy and radiotherapy will be necessary to determine whether this TREATMENT contributes to better prognosis.

#### REFERENCES:

1. Bennet JK, Wheatley JK & Walton KN. Ten-year experience with adenocarcinoma of the bladder. *J. Urol.* 1984; 131: 262–3.
2. Khoury S & Gilloz A. Non-transitional cell carcinomas of the bladder in adults. *Prog. Clin. Biol. Res.* 1984; 162: 275–88.
3. F. Calabrò, C.N. Sternberg. Neoadjuvant and adjuvant chemotherapy in muscle-invasive bladder cancer. *Eur Urol.* 2009; 55: 348-358.
4. A. Dash, J.A. Pettus, H.W. Herr, *et al.* A role for neoadjuvant gemcitabine plus cisplatin in muscle-invasive urothelial carcinoma of the bladder. *Cancer.* 2008; 113: 2471-7.
5. Nogue *et al.* Proc Am Cancer Soc Clin Oncol 19:345a, abstr 1359 (2000).
6. Johnson DE, Hogan JM & Ayala AG. Primary adenocarcinoma of the urinary bladder. *South. Med. J.* 1972; 65: 527–30.
7. Anderstrom C, Johansson SL & Von Schultz L. Primary adenocarcinoma of the urinary bladder: A clinic-pathologic and prognostic study. *Cancer.* 1983; 52: 1273–80.
8. Jacobo E, Loening S, Schmidt JD & Culp DA. Primary adenocarcinoma of the bladder: A retrospective study of 20 patients. *J. Urol.* 1977; 117: 54–6.
9. Logothetis CJ, Samuels ML & Ogden S. Chemotherapy for adenocarcinomas of the bladder and urachal origin: 5-fluorouracil, doxorubicin, and mitomycin-C. *Urology* 1985; 26: 252–5.
10. Nevin 3rd JE, Melnick I, Baggerly JT, Eastley Jr CA & Landes R. Advanced carcinoma of the bladder: Treatment using hypogastric artery infusion with 5-fluorouracil, either as a single agent or in combination with bleomycin or adriamycin and super voltage radiation. *J. Urol.* 1974; 112: 752–8
11. H.W. Herr, Z. Dotan, S.M. Donat, D.F. Bajorin. Defining optimal therapy for muscle invasive bladder cancer. *J Urol.* 2007; 177: 437-443.

\*\*\*\*\*