

Chemotherapy for Primary Adenocarcinoma of the Urinary Bladder: Case Report

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Abstract

A 71-year-old man was admitted to the hospital because of frequent micturition, urgency of urination and vesical tenesmus for one month. For the recent one week, the symptoms above aggravated gradually, accompanied with indisposition and distention of lower abdomen. Cystoscopic examination revealed that the blister lesions which were transparent protruded into the hanging and lateral wall of the bladder. The pathological biopsy showed it was adenocarcinomas of the urinary bladder. The patient was treated with GC plus S-1 chemotherapy with a regular follow-up. The progress of the disease was evaluated according to the standard of curative effect of RECIST. Traditionally, GC is considered as first-line chemotherapy for urothelial cell carcinoma. In this study, we researched the efficacy of GC plus S-1 combination chemotherapy in the study.

Keywords: Adenocarcinoma of bladder; Chemotherapy; GC plus S-1

Introduction

Primary adenocarcinoma of the urinary bladder accounts for approximately 0.5-2% of all bladder cancers. Hematuria, dysuria and suprapubic pain are general symptoms of patients. Radical surgery is regarded the most frequent treatment option, but it is not satisfactory in 5-year survival rates [1]. Patients often lose the chance to undergo the total cystectomy and then present the symptoms of hematuria, obstruction or compression. The symptoms lead to affecting the quality and life span of the patient. Neoadjuvant chemotherapy can be a good option for patients with locally advanced primary adenocarcinomas of the bladder, helping downstage the cancer before surgery, eradicating potential micrometastases, and may avoid local and distant failure [2,3]. However, due to the rare morbidity of primary adenocarcinomas of bladder, the experience of chemotherapy is limited [4]. The current study presents a case of 71-year-old man under the treatment of neoadjuvant chemotherapy.

Case presentation

A 71-year-old man was admitted to our hospital for frequent micturition, urgency of urination, vesical tenesmus for 1 month, and then aggravated with the indisposition and distention of lower abdomen for 1 week without any overt symptoms of macroscopic hematuria, urodynia, abdomen pain or fever. Serum tumor markers of CEA, CA199 and CA153 were evaluated (9.65 ng/ml, 48.09 U/ml, 100.1U/ml, respectively). Cystoscopic examination revealed that mass blister lesions which were transparent protruded into the hanging and lateral wall of the bladder. The openings of bilateral ureteric orifice were slit-like and clear urine was observed. The bladder was confirmed of adenocarcinomas by pathological biopsy. Immunohistochemical stains were done with the following makers: P504S, PSA, Villin, Vimentin, GPC3, CgA, AFP, CK8, Syn, CDx2, CD10, CK7, and CK20. Appropriate positive and negative controls were used. The tumor cells were positive for Vimentin, CK8, CDx2 and CD10. The tumor cells were negative for P504S, PSA, Villin, GPC3, CgA, AFP, Syn, CK7 and CK20. Gastrointestinal tumors were eliminated through electronic gastroscope and enteroscope. The CT-scan of abdomen showed an extensive bladder wall thickened by the tumors, revealing an enhanced edge of the lesion and no enhanced zone of necrosis.

We also noticed the diminution of the bladder lumen, comparatively large lymph nodes of the left pelvic, measuring 7.3 cm×2.0 cm and a lymph node of the right iliac blood vessels, measuring 1.2 cm×0.9 cm. (Figure 1) The patient was treated with GC plus S-1 chemotherapy for 3 cycles totally, 21 d/cycle: gemcitabine 1,000 mg/m² days 1 and 8; cisplatin 70 mg/m² day 2; S-1 50 mg bid day 1-14. (the dose of the GC was according to NCCN guidelines (version 2.2012) and the S-1 was according to our clinical experience). The patient experienced the remission of the symptom after treatment. Tumor markers of CEA, CA199 and CA153 descended as 1.71 ng/ml, 10.45 U/ml and 16.72 U/ml. The CT-scan of abdomen revealed an acceptable bladder filling without obvious abnormality. The local left pelvic wall was compact like nodular changes and the recession of the tumor could be noticed through the CT. The lymph nodes of the left iliac blood vessels were about 6.3 mm×7.1 mm. (Figure 2) We suggested him to accept cystectomy. However, he rejected the operation because he has no medical insurance and can't bear the burden any more. Then the patient was followed up regularly. We did not give further chemotherapy or surgery to the patient. He presented macroscopic hematuria with cruors with the symptoms of frequent micturition, urgency of urination and dysuria in August. Tumor markers of CEA, CA199 and CA153 were evaluated (11.18 ng/ml, 46.34 U/ml and 42.45 U/ml). CT scan of the abdomen revealed abnormal enhanced patch of the wall and the cavity of bladder like trabs, we considered the recurrence of the disease. We also noticed the multiple enlarged lymph nodes of retroperitoneal,

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Figure 1: Before the cycles.



Figure 2: After the cycles.

left renal hilum, left common iliac vessels and bilateral plevic walls. The lymph nodes of the left iliac blood vessels were about 3.4mm×3.2mm. The response of the target lesions to treatment evaluated by computed tomography scan, in accordance with the Response Evaluation Criteria In Solid Tumors (RECIST 1.1) guidelines was complete response (disappearance of target lesion) According to the evaluation standard of curative effect of RECIST, we considered the progression free time (PFS) of the patient with adenocarcinomas of the urinary bladder in our study was 3 months.

Discussion

Adenocarcinomas are account for approximately 2% of primary epithelial malignancies of the urinary bladder [5]. Depending on its origin it is classified as primary, secondary and urachal [6]. Primary adenocarcinoma of the urinary bladder is common in males with the average age of 60 years old. It is very common that patients go to the hospitals due to the hematuria and irritative symptoms. The diagnosis of adenocarcinoma of urinary bladder must depend on pathology, and exclude metastatic adenocarcinoma. B Ultrasound and CT are very important auxiliary examinations for adenocarcinomas of urinary bladder, which can indicate the size, range of the tumor and enlarged lymph nodes, and have positive significance for the diagnosis of urachal carcinoma. The primary adenocarcinomas of the urinary bladder are characterized by high degree of malignancy, depth of invasion and difficulty of diagnosis which leads to unappealing effect of treatment

at present. There has been no standard chemotherapy for the primary adenocarcinomas of the urinary bladder at present. According to the National Comprehensive Cancer Network (NCCN; version 2.2014), some reports suggest a 5-fluorouracil (5-FU)-based regimen should be tried, and chemotherapy with methotrexate, vinblastine, doxorubicin, and cisplatin (MVAC) is not effective for primary adenocarcinomas of the urinary bladder [7,8]. Moreover, gemcitabine plus cisplatin (GC) has proved viable as first-line chemotherapy for urothelial (transitional) cell carcinoma with overall survival comparable to that of MVAC but with fewer side effects [9]. We used GC plus S-1 chemotherapy in this study. Johnson et al. [10] reported that compared with methotrexate, vinblastine, doxorubicin, and cisplatin, GC as first-line chemotherapy for urothelial cell carcinoma has fewer side effects and similar overall survival. Furthermore, adenocarcinomas of the urinary bladder have a clinical behavior similar to that of urothelial (transitional) cell carcinoma of the bladder, 5-FU is widely used in the treatment of adenocarcinomas (such as stomach cancer), and Logothetis et al. [7] reported treatment for urachal cancers by using 5-FU, to avoid some of the inconveniences and adverse effects of 5-FU, continuous 5-FU infusion has recently been replaced by S-1 [11,12]. S-1 is a novel oral Xuropyrimidine derivative that consists of tegafur, 5-chloro-2, 4-dihydropyrimidine (CDHP) and potassium oxonate. In our another study, we obtained encouraging results by using GC plus S-1 for neoadjuvant chemotherapy compared with a study conducted by the MD Anderson Cancer Center (MDACC) used combinations of 5-FU and cisplatin [8]. In line with result of complete response (disappearance of target lesion) and symptomatic improvement after the neoadjuvant therapy. We obtained ideal recent results, but the patient has no medical insurance, he did not undergo further treatment, the effect of the surgery for the patient we can not know in this study. Due to the short time of overall survival, choosing the right operation time after neoadjuvant therapy is particularly important, it still needs further study. Although the reported survival rates of the prognosis of adenocarcinoma of bladder in 1 year were different, from 23.1% to 87.51%, the 5 year survival rates were generally low, from 5% to 33% [13,14]. Adenocarcinomas of the urinary bladder are rare and all studies are limited in the small cases. The choice of chemotherapy regimens has been based largely on case reports and single institution experiences and the statistical power is limited. Therefore, it is very necessary to explore the positive treatment to improve the bladder adenocarcinoma survival rate.

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