Medical & Surgical Urology

Li et al., Med Sur Urol 2017, 6:1
DOI: 10.4172/2168-9857.1000177

Case Report Open Access

A Case of Metastatic Urachal Carcinoma Treated with Palliative Chemotherapy with Gemcitabine and Cisplatin

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Recieved date: November 18, 2016; **Accepted date:** January 20, 2017; **Published date:** January 27, 2017

Abstract

Urachal carcinoma is a rare, non-urothelial carcinoma that represents less than one percent of all bladder cancers. We present a case of a 48-year-old man who presented metastatic urachal carcinoma with intermittent abdominal pain and a poor Performance Status (PS). The patient initially underwent two cycles of XELOX-P (Oxaliplatin/Xeloda/Paclitaxel) chemotherapy after his initial salvage surgery. He came to our hospital for tumor progression and badly abdominal pain. He then received Gemcitabine and Cisplatin (GC) regimen at 80% of the dose with good tolerance and manageable toxicities. After six cycles of chemotherapy, he had a stable disease response, including impressive clinical response on medical symptoms and minor shrinkage of tumor mass on imaging. This case suggests the importance of palliative chemotherapy of GC regimen for the metastatic urachal cancer patients, and that performance status alone should not be limiting decision factors for cancer patients.

Keywords: Chemotherapy; Urachal carcinoma; Metastases

Introduction

The urachus is the fibrosis remnant of the allantois, a canal that drains the fetal bladder from the dome of the bladder to the umbilical cord. Urachal carcinoma is a rare non-urothelial carcinoma involving this vestigial remnant and accounts for about 0.2% of all bladder cancers [1]. Histologically, urachal tumors are almost universally adenocarcinomas, whereas the histology of traditional bladder cancer is typically transitional epithelium carcinoma or more rarely squamous carcinoma [2]. Unlike other urothelial cancers, there is currently no standard chemotherapy regimen for the treatment of urachal cancers, especially for the metastatic patients or recurrent patients. We present a case of metastatic urachal cancer and briefly review common diagnostic and treatment considerations.

Case Report

A 48-year-old man presented to our department in February 2016 with a 3-month history of urachal carcinoma, and with intermittent abdominal pain of 1-week duration. The man was referred to a different cancer clinic with a palpable abdominal mass threre months ago. He was diagnosed with urachal adenocarcinoma with peritoneal and liver invasion. His preoperative positron emission tomography (PET-CT) showed a mass of 3.4 cm × 3.7 cm with high uptake of 18F-FDG (SUC 10.35) at the right side of umbilicus and back of right rectus abdominis muscles, which had grown into nearby intestines. PET-CT also showed an increased 18F-FDG uptake in the nearby lymph nodes and in hepatic segments. The patient then underwent an abdominal lumpectomy with abdominal wall reconstruction surgery, a partial intestine resection and a right hemicotomy, a hepatic segments (S5 and S8) resection and cholecystectomy. The biopsy revealed adenocarcinoma, with immunohistochemistry positive for antibodies to CDX2, cytokeratin 7, carcinoembryonic antigen (CEA), serum carbohydrate antigen 19-9 (CA 19-9) and cytokeratin 19. After the two cycles of XELOX-P regimen (Oxaliplatin 130 mg/m^2 IV on d1 every 21 days, Xeloda 2000mg/m^2 PO on d1-d14 every 21 days, Paclitaxel 80 mg/m^2 on d1 and d8 every 21 days), the restage CT scan showed tumor progression. He was referred to our institution for his badly abdominal pain. He was suffering vague, sustained and aggravating lower abdominal pain initiating gastrointestinal symptoms with abdominal pulling sensation. Pain symptoms worsened despite maximal analgesic treatment and the patient reported anorexia, weight loss, increasing gastrointestinal symptoms and painful defecation. The patient was in poor general physic condition, with a Performance Status (PS) of 3 and a Karnofsky Performance Status score (KPS) at 40%. The CT scan showed an irregular, partially cystic mass at abdominal cavity; nodular peritoneal thickening at abdominal cavity, consistent with peritoneal seeding, enlarged lymph nodes in the retroperitoneum, with liver metastasis (Figures 1 and 2). His tumor markers serum carcinoembryonic antigen (CEA) was elevated at 886.4 ng/mL (normal, below 5.0 ng/mL), and carbohydrate antigen 199(CA-199) was elevated at 786.6 U/mL (normal, below 35 U/mL). We started second-line therapy with GC regimen at 80% of the dose (Gemcitabine 0.8 g/m^2 IV on d1, d8 every 21 days, Cisplatin 60 mg/m^2 IV on d1 every 21 days). He received six cycles of GC regimen with good tolerance and manageable toxicities. He had a stable disease response, including impressive clinical response on medical symptom and minor shrinkage of lymph nodes and liver metastasis on CT imaging (Figures 1 and 2). Moreover, his dosage of oxycodone hydrochloride tablets from 100 mg 1/12 h (February, 2016) to 20 mg 1/12 h (September, 2016). In October 2016, the patient no longer expressed complaints and remained asymptomatic with a KPS at 80%. His tumor markers CEA was decreased to 126.8 ng/Ml, and CA 19-9 was decreased to 90.5 U/mL. He is currently being evaluated for a clinical trial relative to Traditional Herbs Medicine as palliative treatment.

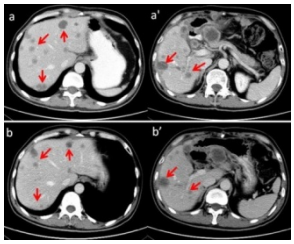

Figure 1: CT scan of the heterogeneous nodules in abdominal cavity and the neoplasm seeding nodule. (a, a') The CT images of the tumors (arrows) before GC chemotherapy (February, 2016); (b, b') The CT images of the tumors (arrows) after GC chemotherapy (September, 2016).

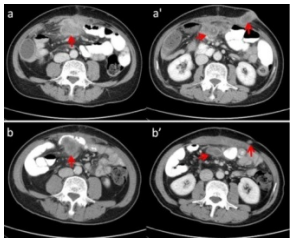

Figure 2: CT scan of the liver metastasis. (a, a') Several tumor lesions with peripheral enhancement in liver before GC chemotherapy (arrows) (February, 2016); (b, b') The tumor lesions in liver were slightly shrinking after GC chemotherapy (arrows) (September, 2016).

Discussion

Urachal carcinoma is rare and comprises 0.35% to 0.7% of all bladder cancers and 22-35% of vesical adenocarcinomas [2,3]. The prognosis for patients with urachal carcinoma [Suppl Figure 1] is generally poor, because these tumors often escape clinical detection and grow for a prolonged period before diagnosis, which allows for local invasion and systemic spread before therapeutic intervention is initiated [4]. Metastases initially are seen primarily in the pelvic lymph nodes, locally in the space of Retzius, or at the apex of the bladder and distant metastatic sites are noted in multiple organs, including liver, lung, bone, brain and lymph nodes [5].

Hematuria and palpable suprapubic mass are the most common presenting features of urachal cancer, each occurring in 64% of patients. The other common presenting features include abdominal pain, irritating voiding symptoms, discharge of mucus or blood through the umbilicus and mucusuria [3].

Urachal carcinoma is generally resistant to radiotherapy and chemotherapy. The prognosis of metastatic urachal cancer is extremely por and that there no survival benefit noted for lymphadenectomy or adjuvant chemotherapy for the patient with metastatic urachal carcinoma [5].

Histologically, urachal adenocarcinoma has been found to be similar to gastric and colon adenocarcinoma, and in some studies CPT-11-based chemotherapy and FOLFOX-based chemotherapy have been reported to be efficacious for treating metastatic urachal adenocarcinoma [6-8]. However, the Oxaliplatin/Xeloda/Paclitaxel chemotherapy seemed not effective in delaying disease progression in our case.

Gemcitabine/cisplatin chemotherapy has been reported to treat recurrent and metastatic urachal adenocarcinoma with some success [9]. Shin Ebara reported a good case of gemcitabine/cisplatin/paclitaxel (GCP) regiment not only as a salvage chemotherapy but also as a rechallenge regimen for metastatic urachal cancer including a neuroendocrine component [10]. A randomized trial reported that GC provides a similar survival advantage to metastatic urachal adenocarcinoma with a better safety profile and tolerability [11]. That is why we introduced GC chemotherapy for progress and metastasis after the XELOX-P chemotherapy.

Though PS should be the limiting factors for launching chemotherapy, palliative chemotherapy may be useful to reduce symptoms caused by a cancer. Because eligibility criteria usually exclude higher comorbodities and the feeble patients (PS2) of clinical trials, it is hard to translate trial treatment outcomes to a real-world setting. Palliative chemotherapy is chemotherapy treatment which is given to relieve the symptoms of cancer, but not meant to cure cancer or to extend life. The goals of this treatment is relieve symptoms, slow progression of cancer and improve quality of life. Sometimes palliative chemotherapy was demonstrated to be palliative and to improve survival [12]. The palliative GC chemotherapy also helped our patient by reducing symptoms such as pain, anorexia, and improve well-being and quality of life.

Chemotherapy continues to have an appropriate role in palliating symptoms among selected patients with advanced cancer. This is a case report of the use of GC chemotherapy not only as a salvage chemotherapy after the failure of XELOX-P chemotherapy but also as a treatment that is given in the non-curative setting to optimize symptom control, improve or maintain QoL and, ideally, to also improve survival.

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