Case Report

Diffuse large B-cell lymphoma of the urinary bladder with synchronous rectum invasion: A rare case report

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ABSTRACT

Diffuse large B-cell lymphomas (DLBCLs) are a heterogeneous group of malignant neoplasms appeared in the lymphocyte cell lines, accounting for approximately 25-30% of lymphoma cases. The occurrence of primary urinary bladder or rectal lymphomas synchronously is uncommon, also first presenting sign of disseminated disease in bladder or rectum are considerably rare. Here, we report the first case of extensive DLBCL in bladder and rectum synchronously mimicking primary urinary bladder lymphoma in a 43-year-old male, relatively young patient.

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1. Introduction

Diffuse large B-cell lymphomas (DLBCLs) are a heterogeneous group of malignant neoplasms occurred in lymphocyte cell lines; accounting for approximately 25-30% of lymphoma cases (Morton et al., 2006). In addition, the occurrence of primary urinary bladder lymphomas is uncommon, also first presenting sign of disseminated disease in bladder is quite rare. It represents 0.2% of primary lymphomas and 1.8% of secondary lesions of malignant lymphoma (Bates et al., 2000). Additionally, less than 20% of the cases of bladder lymphoma are diagnosed as DLBCL (Bates et al., 2000). On the other hand, approximately 0.2-0.6% of malignant lymphomas arises in the colorectal tract, with a DLBCL predominantly (Dionigi et al., 2007). These two distinct presentation of lymphoma have different epidemiological features; lymphomas of the urinary bladder are more common in females who are more than 60 years old (Venyo, 2014), while colorectal lymphomas appears predominantly in males
with a mean age of diagnosing at 55 years (Fan et al., 2000). To our knowledge, we describe the first report of a primary urinary bladder DLBCL presenting with a synchronous rectum invasion in a 43-year-old male, relatively young patient.

2. Case presentation
A 43-year-old male patient was admitted to internal medicine clinic with complaints of abdominal pain, loss of appetite and oliguria during two weeks prior to admission. His past medical history was unclear. Physical examination showed abdominal distention, tenderness and bilateral basal rales in the lungs. His laboratory findings are as follows; Hb: 12.6 g/dl, WBC: 10200 cells/mm³, PLT: 279000 cells/mm³, BUN: 44 mg/dl, Creatinine: 8.1 mg/dl, AST: 15 mg/dl, ALT: 18 mg/dl, LDH: 399 U/l, Erythrocyte Sedimentation Rate (ESR): 76 mm/h, and C-reactive protein (CRP): 42.7 mg/l. Laboratory tests for hepatitis A-B-C, HIV and EBV were negative as well.

Abdominal computed tomography (CT-scan) showed hydrenephrosis and hydroureter on both sides, thickening in bladder wall with severe thickening in the right posterolateral aspect of the bladder, and heterogenous thickening of pelvic lipid tissue. His abdominal magnetic resonance imaging (MRI) showed heterogeneous hiperintensity of diffuse thickening of the bladder wall with continuation of the thickening in both distal ureters, vesicula seminalis, perirectal fascia, rectum and surrounding connective tissue in the axial T2-weighted images (Fig. 1A). The patient was diagnosed as acute postrenal failure caused by the obstruction of bilateral urinary tracts. At that time, emergency hemodialysis was performed. Cystoscopic examination showed diffuse thickening of whole bladder wall, causing obstruction of the ureters. Then, biopsies were taken and bilateral double-j stents was inserted. The pathological examination of the specimens from the bladder revealed diffuse invasion of the detrusor muscle by atypical lymphocytes. Also,
focal positivity of CD20 (Fig. 1B) and diffuse positivity of CD79α (Fig. 1C) in lymphoid cells were detected in diffusely invaded bladder, and then it was diagnosed as DLBCL. Patient’s bone marrow biopsy showed no abnormalities. Colonoscopy demonstrated an ulcerated flat lesion on proximal rectum. Pathological examination of rectal lesion showed a diffuse invasion on muscularis mucosa and lamina propria by atypical lymphocytes (Fig. 1D) and diagnosed as DLBCL. A staging PET-CT scan showed similar findings with CT and MRI, and the patient was diagnosed as Stage IVA DLBCL according to Ann Arbor Staging system, presenting bladder DLBCL with a synchronous rectum.

The patient received six cycle of R-CHOP chemotherapy (rituximab 375 mg/m² intravenously on day 1; cyclophosphamide 750 mg/m², doxorubicine 50 mg/m², vincristine 1.4 mg/m² intravenously on day 2; prednisolone 100 mg/body orally on day 2 to 6). After one cycle of the systemic chemotherapy, clinical symptoms disappeared. After the completion of 6 cycle R-CHOP chemotherapy, CT and PET-CT showed partial response and salvage chemotherapy with R-GemOx (rituximab 375 mg/m² on day 1, gemcitabine 1000 mg/m² and oxaliplatin 100 mg/m² on day 2) was initiated. After two cycles of R-GemOx, the patient’s symptoms were improved and autologous bone marrow transplantation was planned to our patient.

3. Discussion

Lymphomas of bladder or colorectal tract are extremely rare, and these may be first presenting symptoms of a diffuse lymphoma or a primary disease. To date, a number of primary lymphoma of the bladder (Bates et al., 2000; Venyo, 2014) and colorectal tract (Fan et al., 2000; Dionigi et al., 2007) have been cited in the literature. However, a presenting symptom of extensive lymphoma cases from Mayo Clinic Centre, radical surgical resection may be better than non-operative approach (Devine et al., 1986). The survival advantage with the use of R-CHOP in DLBCL was shown in the study (Coiffier et al., 2010). In this case we managed successfully bulky Stage IVA extensive DLBCL with 6 cycles R-CHOP systemic chemotherapy R-CHOP regimen was improved symptoms and outcomes in previous reports of bladder and colorectal DLBCL (Ismaili et al., 2009; Venyo, 2014) as well. In our patient, after the completion of six cycles R-CHOP chemotherapy, only partial response was detected and the salvage chemotherapy with R-GemOx was initiated (El Gnaoui et al., 2007). The patient was received two cycles of R-GemOx and well done. The possible reason for partial response to recommended chemotherapy may be associated with our patient’s bulky tumor in relatively young age and multiple presenting site of the disease. In spite of the lack of randomized controlled trials, reported outcomes with R-CHOP are satisfactory and this regimen can be considered as a first line treatment option for DLBCL. In addition to these, challenging cases will be still needed to an optimal or standard salvage strategy.

REFERENCES


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