PO Box 2345, Beijing 100023, China
www.wjgnet.com
wjg@wjgnet.com

World J Gastroenterol 2006 March 28; 12(12): 1978-1979
World Journal of Gastroenterology ISSN 1007-9327

LETTERS TO THE EDITOR

Cytomegalovirus gastritis after rituximab treatment in a non-Hodgkın's lymphoma patient

Ugur Unluturk, Sercan Aksoy, Ozlem Yonem, Yusuf Bayraktar, Gulten Tekuzman

Ugur Unluturk, Hacettepe University Faculty of Medicine, Department of Internal Medicine, Ankara, Turkey
Sercan Aksoy, Gulten Tekuzman, Hacettepe University Institute of Oncology, Ankara, Turkey
Ozlem Yonem, Yusuf Bayraktar, Hacettepe University Faculty of Medicine, Department of Internal Medicine, Unit of Gastroenterology, Ankara, Turkey
Correspondence to: Dr. Sercan Aksoy, Hacettepe University Institute of Oncology, 06100, Sıhhiye, Ankara, Turkey, saksoy07@yahoo.com
Telephone: +90-312-305 2937 Fax: +90-312-324 2009
Recevied: 2005-09-30 Accepted: 2005-11-10

Unluturk U, Aksoy S, Yonem O, Bayraktar Y, Tekuzman G. Cytomegalovirus gastritis after rituximab treatment in a non-Hodgkın's lymphoma patient. *World J Gastroenterol* 2006; 12(12): 1978-1979

http://www.wjgnet.com/1007-9327/12/1978.asp

TO THE EDITOR

Rituximab is a chimeric monoclonal antibody against CD20 antigen expressed on most B cells and is used for the treatment of malignant lymphomas expressing the CD20 antigen[1]. It temporarily eliminates normal B-lymphocytes without a substantial decrease in serum immunoglobulin levels[2]. Recently, several serious viral infections have been reported in association with rituximab use. Cytomegalovirus (CMV) is one of the agents that may be a cause of morbidity and mortality in immunocompromised individuals[2, 3]. In the face of exogenous or endogenous causes of immunosuppression, cytomegalovirus can result in retinitis, colitis, pneumonitis, or encephalitis. Presented here is a case of a patient with non-Hodgkin's lymphoma (NHL) who developed gastritis and enterocolitis due to CMV infection after treatment with rituximab.

A 65-year old female patient was admitted with complaints of epigastric pain and diarrhea. Prior to her admission she was treated for diffuse large cell type NHL, stage IIIB bulky disease with six courses of a regimen consisting of cyclophosphamide, doxorubicin, vincristine and prednisone (CHOP) and rituximab, and a good partial response was achieved. Due to the presence of bulky disease at presentation, she also received radiotherapy (RT) to the parailiac and inguinal regions at a dose of 3000 centigray (cGy), one month after chemotherapy. Two weeks after radiotherapy, she presented with epigastric pain and diarrhea without blood and mucous. Microscopic examination of stool specimens was unremarkable. Her blood and stool cultures were negative. Her chest X-ray was also normal. Initial investigations revealed normal hemoglobin concentration and platelet count as well as mild leucopenia. The number of white blood cells was 3.6×10^9/L (3.0×10^9/L neutrophils). Serum levels of glucose, amylase, liver transaminases, urea and electrolytes were normal. Based on the preliminary diagnosis of radiation enteritis, antidiarrheal therapy was initiated. The patient did not benefit from this, and her epigastric pain aggravated. A computerized tomography scan of the abdomen revealed gastric wall thickening as well as findings consistent with colitis of the ascending and transverse colon. Subsequent upper gastrointestinal endoscopic evaluation demonstrated multiple linear exudative gastric ulcers, the largest being 4 cm in diameter, from which multiple biopsy specimens were obtained. Histological examination revealed hyperchromatic epithelial cells with nuclear viral inclusions (owl's eye). These cells were positive for monoclonal antibodies against CMV. However, peripheral blood CMV viral load was negative. She failed to respond to acid suppression therapy and her clinical condition deteriorated further. Repeat upper gastrointestinal endoscopy and histological examination of biopsy specimens were consistent with the previous results. Consequently, treatment with intravenous gancyclovir (2×5 mg/kg) was initiated with a diagnosis of CMV gastritis and enterocolitis. Dramatic clinical improvement was achieved within one week and treatment was continued for 3 weeks. Her symptoms resolved completely and a subsequent endoscopy only showed signs of healing ulcers.

Pelvic or abdominal RT is a known cause of acute enteritis characterized by abdominal cramping and diarrhea in approximately 50% of treated patients, and the incidence is higher with concomitant chemotherapy[4]. Acute intestinal side effects of RT occur at doses of approximately 1000 cGy. Since the curative doses for most abdominal or pelvic tumors range between 5000 and 7000 cGy, enteritis is more often than not likely to occur[5]. Our patient received 3000cGy of RT and probably developed RT-induced enteritis. However, antidiarrheal therapy with oral opiates failed to alleviate the patient's complaints, which only resolved after anti-CMV therapy.

Cytomegalovirus enterocolitis should be considered in the differential diagnosis in patients receiving rituximab

whose symptoms fail to resolve after conventional anti-diarrheal therapy, irrespective of peripheral blood CMV viral load.

REFERENCES

1 **Czuczman MS**, Grillo-López AJ, White CA, Saleh M, Gordon L, LoBuglio AF, Jonas C, Klippenstein D, Dallaire B, Varns C. Treatment of patients with low-grade B-cell lymphoma with the combination of chimeric anti-CD20 monoclonal antibody and CHOP chemotherapy. *J Clin Oncol* 1999; **17:** 268-276

2 **Suzan F**, Ammor M, Ribrag V. Fatal reactivation of cytomegalovirus infection after use of rituximab for a post-transplantation lymphoproliferative disorder. *N Engl J Med* 2001; **345:** 1000

3 **Goldberg SL**, Pecora AL, Alter RS, Kroll MS, Rowley SD, Waintraub SE, Imrit K, Preti RA. Unusual viral infections (progressive multifocal leukoencephalopathy and cytomegalovirus disease) after high-dose chemotherapy with autologous blood stem cell rescue and peritransplantation rituximab. *Blood* 2002; **99:** 1486-1488

4 **Benson AB 3rd**, Ajani JA, Catalano RB, Engelking C, Kornblau SM, Martenson JA Jr, McCallum R, Mitchell EP, O'Dorisio TM, Vokes EE, Wadler S. Recommended guidelines for the treatment of cancer treatment-induced diarrhea. *J Clin Oncol* 2004; **22:** 2918-2926

5 **Perez CA**, Brady LW, eds.: Principles and Practice of Radiation Oncology. 3rd ed. Philadelphia, Pa: Lippincott-Raven Publishers, 1998

S- Editor Guo SY **L- Editor** Wang XL **E- Editor** Bai SH