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# Cytomegalovirus enterocolitis in a patient with diffuse large B-cell lymphoma after chemotherapy with rituximab

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## Abstract

Rituximab has been associated with the development of cytomegalovirus enterocolitis in immunosuppressed patients. A 51-year-old patient with diffuse large B-cell lymphoma who received a conditioning chemotherapy regimen (RCVP and RICE) consisting of rituximab before bone marrow transplantation went on to develop cytomegalovirus enterocolitis. This supports evidence from previously described cases that rituximab may be associated with cytomegalovirus enterocolitis.



**Key words:** Rituximab; Cytomegalovirus; Enterocolitis; Diffuse large B-cell lymphoma; Immunosuppression

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## TO THE EDITOR

In response to Unluturk *et al*'s letter to the editor entitled 'Cytomegalovirus gastritis after rituximab treatment in a non-Hodgkin's lymphoma patient[1], a similar case of cytomegalovirus (CMV) enterocolitis after treatment with rituximab has been described in a similar patient.

Rituximab, a monoclonal antibody targeting CD20 molecules on B-lymphocytes, can be given in combination with the chemotherapy regimen CVP (cyclophosphamide, vincristine and prednisolone), as the first treatment for people who have advanced (stage three or four) follicular lymphoma when first diagnosed or for people with advanced (stage three and four) follicular lymphoma, whose lymphoma has come back after initial chemotherapy[2].

A 51-year old patient diagnosed with follicular lymphoma in August 2004 was treated with a splenectomy and eight courses of RCVP (rituximab, cyclophosphamide, vincristine and prednisolone) combined chemotherapy, which led to a partial remission. In March 2006 the follicular lymphoma transformed to diffuse large B-cell lymphoma (DLBCL) and he was then treated with three courses of RICE (rituximab, ifosfamide, cytosine-arabinoside and etoposide) combined chemotherapy, which again led to only a partial remission.

It was decided to proceed with an autologous peripheral blood stem cell transplant in August 2006. In the week preceding transplant he was treated with a conditioning chemotherapy regimen consisting of carmustine, etoposide, cytarabine, and melphalan. His pre-tansplant CMV PCR status was negative. In the immediate days post-transplant he developed conditioning chemotherapy-related mucositis affecting his whole gastrointestinal tract, which was treated symptomatically. Faecal microscopy and stool cultures at the time were negative. The mucositis resolved two weeks post transplant but then in the third week he developed profound diarrhoea passing two litres of liquid faeces per day. CMV was detected by PCR, but bacteriological analysis of the faeces was otherwise negative. With a provisional diagnosis of CMV enterocolitis, a colonoscopy was performed and biopsies were taken from the terminal ileum and colon. Histological analysis of the biopsy material revealed evidence of CMV inclusions. He was started on ganciclovir with marked symptomatic improvement and resolution of his diarrhoea.

This case supports Unluturk *et al*'s case that CMV enterocolitis may occur after treatment with rituximab in patients with non-Hodgkin's lymphoma. Whether this is an opportunistic reactivation infection related to rituximab-induced immunosuppression needs further research.

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