Case Report

Case Report: Severe CMV Colitis in a Patient with Follicular Lymphoma after Chemotherapy

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Background: *Cytomegalovirus (CMV) can infect immuno-compromised host, especially in HIV and bone marrow transplantation patients. CMV colitis was reported after receiving chemotherapy in a solid tumor and aggressive Non-Hodgkin's lymphoma, but not yet in indolent lymphoma patients.*
Case Report: *In the present report, a 64-year-old woman was re-admitted with watery diarrhea after eight cycles of chemotherapy for Follicular lymphoma. She had hyponatremia, hypokalemia, and hypocalcemia, which were the consequences of severe diarrhea. After two weeks of continuous diarrhea, she was set for colonoscopy, which showed multiple ulcers along the colon. Pathological results were found to be consistent with CMV colitis. Her diarrhea symptom improved after receiving ganciclovir.*
Conclusion: *CMV colitis could occur in indolent lymphoma patients who receive R-CVP regimen (rituximab, cyclophosphamide, vincristine, and prednisolone). Patients exhibiting severe and prolonged diarrhea should be investigated for definite diagnosis in order to receive proper treatment.*

Keyword: *Cytomegalovirus, CMV colitis, Follicular lymphoma*

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Cytomegalovirus usually affects immuno-compromised hosts or bone marrow and solid organ transplantation patients[1-4]. Few non-Hodgkin's lymphoma patients were reported for CMV colitis after salvage regimen[5,6]. One case of myelodysplastic syndrome (RAEB) was reported for CMV colitis after fludarabine-based chemotherapy[7]. Solid tumor patients were also reported to have CMV colitis after chemotherapy[8-11]. CMV colitis has not been reported in indolent lymphoma after receiving R-CVP (rituximab, cyclophosphamide, vincristine and prednisolone) chemotherapy regimen yet.

Case Report

A 64-year-old woman was diagnosed with relapsed Follicular lymphoma stage IV. Her first presentation was axillary and groin lymphadenopathy nine years ago. She received eight cycles of CHOP regimen, which composed of cyclophosphamide, vincristine, doxorubicin and prednisolone. After the chemotherapy, she was in complete remission until last year when she developed cervical and groin lymphadenopathy. The bone marrow study also showed involvement of lymphoma cells. R-CVP regimen was the chosen chemotherapy, which composed of rituximab, cyclophosphomide, vincristine and prednisolone. After four days of the eighth cycle of chemotherapy, she developed acute watery diarrhea with fever. Stool examination showed green-yellow color, loose consistency appearance with mucous. There were white blood cells and red blood cells of 30-50 cells/HPF (high power field) in the stool. Bacterial culture of the stool was negative for *salmonella* spp., *shigella* spp., *vibrio* spp., *aeromonas* spp. and *plesiomonas* spp. Ceftazidime, amikacin, later on, metronidazole was given, but her diarrhea did not improve. She also developed hyponatremia, hypokalemia, hypocalcemia, hypomagnesemia and hypophosphatemia as complication of the continuous diarrhea (corrected calcium = 7.56 mg/dL, phosphorus 1.2 mg/dL, sodium 130 mmol/l, potassium 2.9 mmol/l,

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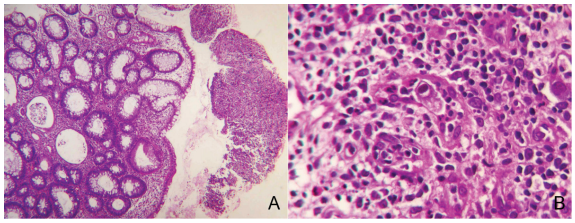

Fig. 1 A and B Section of colon mucosa showing infiltration of atypical enlarged cells which containing intranuclear inclusions with a peri-nuclear halo compatible with cytomegalovirus infection of colon

magnesium 0.8 mg/dl). She had tetany in both hands from hypocalcemia, which was resolved after calcium infusion. After two weeks of unimproved diarrhea, colonoscopy was done. There were multiple ulcers at ileum, cecum, ascending and transverse colon. The biopsy revealed ulcerative colonic mucosa filled with proliferated endothelial cells at base of ulcer. Endothelial cells infiltrated with atypical cells possessed oval eosinophilic intranuclear inclusion with a perinuclear halo which were compatible with cytomegalovirus infection (Fig. 1). After the 21 days of ganciclovir administration, her diarrhea resolved and all the metabolic abnormalities improved.

Discussion

Rituximab-based chemotherapy is the regimen of choice for B-cell, non-Hodgkin's lymphoma. Rituximab itself has non-severe general side effects, common are transfusion-related symptoms, such as fever, chill, flushing. Other side effects include reactivation of viral infections (such as hepatitis B virus) and cardiovascular and renal toxicity[12,13]. Bone marrow suppression and immunosuppression is less likely caused by Rituximab. CVP chemotherapy regimen, which is composed of cyclophosphamide (650 mg/m^2),vincristine (2 mg/m^2)and prednisolone (100 mg/d for 5 days), is the standard recommendation for indolent lymphoma. The regimen has been documented to cause fewer side effects and is well-tolerated for elderly. Severe infections have been reported rarely by this chemotherapy.

R-CVP chemotherapy is the regimen of choice for indolent lymphoma patients referring to The National Comprehensive Cancer Network (NCCN) guideline[14]. The regimen was documented to cause fewer side effects especially, uncommon infection such as cytomegalovirus. Unlike the intense chemotherapy such as salvage regimen for lymphoma patients, or chemotherapy for some solid tumors, the R-CVP usually does not cause cytopenia or suppresses the immune system, which would cause infection by atypical microorganism such as fungus or virus.

In the present report, the follicular lymphoma patient suffered from continuous diarrhea and imbalance of electrolytes for almost two weeks before further investigation and specific treatment. The present case report reveals a serious uncommon infection in an indolent lymphoma patient in which specific investigation should be performed to define the diagnosis.

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Potential conflicts of interest

None.

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รายงานผู้ป่วยมะเร็งต่อมน้ำเหลืองที่เกิดลำไส้อักเสบจากเชื้อซีเอ็มวีอย่างรุนแรงหลังได้ยาเคมีบำบัด

จันทนา ผลประเสริฐ, ชัชวาลย์ วงศ์จิตรัตน์, นฤมล วิเศษโอภาส

ภูมิหลัง: *เชื้อไวรัสซีเอ็มวีสามารถทำให้เกิดโรคได้ในผู้ป่วยที่มีภาวะภูมิคุ้มกันบกพร่อง โดยเฉพาะผู้ป่วยติดเชื้อเอ็ชไอวี หรือผู้ป่วยที่ได้รับการปลูกถ่ายไขกระดูก ได้มีรายงานผู้ป่วยที่เกิดลำไส้อักเสบจากเชื้อซีเอ็มวีหลังจากได้รับยาเคมีบำบัดในกลุ่มผู้ป่วยมะเร็งที่ไม่ใช่มะเร็งเม็ดเลือด และในกลุ่มผู้ป่วยมะเร็งต่อมน้ำเหลืองแบบรุนแรงแต่ยังไม่เคยมีรายงานในผู้ป่วยมะเร็งต่อมน้ำเหลืองชนิดฟอลลิคูล่า ซึ่งเป็นชนิดไม่รุนแรงที่ได้รับยาเคมีบำบัดที่ไม่กดไขกระดูก*

รายงานผู้ป่วย: *ผู้นิพนธ์ได้นำเสนอผู้ป่วยหญิงอายุ 64 ปี ซึ่งเข้ารับการรักษาที่โรงพยาบาลด้วยอาการถ่ายเหลวเป็นน้ำหลังจากได้ยาเคมีบำบัดชนิดที่ไม่กดไขกระดูก 8 ครั้งสำหรับรักษาโรคมะเร็งต่อมน้ำเหลืองชนิดฟอลลิคูล่า อาการถ่ายเหลวรุนแรงจนทำให้เกิดภาวะโซเดียมต่ำ โพแทสเซียมต่ำ และแคลเซียมต่ำร่วมด้วยหลังจากที่ผู้ป่วยถ่ายเหลวเป็นเวลา 2 สัปดาห์ ผู้ป่วยได้รับการส่องกล้องลำไส้ใหญ่ ผลพบว่ามีแผลจำนวนมากตลอดลำไส้ใหญ่ ซึ่งผลชิ้นเนื้อเข้าได้กับลำไส้อักเสบจากการติดเชื้อไวรัสซีเอ็มวี และภายหลังจากได้รับยาต้านไวรัส gancyclovir อาการถ่ายเหลวของผู้ป่วยค่อย ๆ หายไป*

สรุป: *ภาวะลำไส้อักเสบจากการติดเชื้อไวรัสซีเอ็มวีสามารถพบได้ในผู้ป่วยมะเร็งต่อมน้ำเหลืองที่ไม่รุนแรงที่ได้รับยาเคมีบำบัดที่ไม่กดไขกระดูกคือ Rituximab, Cyclophosphamide, Vincristine และ prednisolone (R-CVP) ดังนั้นผู้ป่วยที่มีอาการถ่ายเหลวอย่างต่อเนื่องเป็นเวลานานควรที่จะได้รับการตรวจหาสาเหตุโดยเร็วเพื่อจะได้ทำการรักษาได้ถูกต้อง*