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CHOP plus rituximab therapy in Waldenstrom's macroglobulinemia.

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Recently, a consensus panel of experts recommended that patients with Waldenstrom's macroglobulinemia (WM) who are candidates for future autologous transplantation should have limited alkylator or nucleoside analogue exposure due to potential stem cell harm. Cyclophosphamide/doxorubicin/vincristine/prednisone/rituximab (CHOP-R) is a stem cellsparing regimen that has been extensively evaluated in patients without WM or non-Hodgkin's lymphoma. As such, we analyzed the outcome of 13 patients with WM who received CHOP-R at our institution. Patients had a median age of 54 years and a median of 1 previous therapy. Ten of 13 patients (77%) had relapsed (n = 3) or refractory (n = 7) disease. Eight and 6 patients had previously received fludarabine and rituximab, respectively. Intended therapy consisted of 6 cycles of standard-dose CHOP and 6 infusions of rituximab (375 mg/m2). Three patients received additional rituximab as maintenance therapy. Median immunoglobulin M and serum viscosity for all patients decreased from 5230 mg/dL to 1690 mg/dL (P < or = 0.001) and from 2.9 cP to 1.6 cP (P = 0.01), respectively, and the median hematocrit level rose from 30.5% to 39.3% (P < or = 0.001). Clinical responses were as follows: 3 complete responses unconfirmed, 8 partial responses, 1 minor response. At a median follow-up of 9 months (range, 6 to > 37 months), 10 of the 11 patients who had a major response remained in remission. Therapy was well tolerated for most patients. Two patients had febrile neutropenia with documented bacteremia and recovered without complications. Circulating effector cell levels were also evaluated in 6 patients before and after CHOP-R, because rituximab activity is mediated in part by antibody-dependent cell-mediated cytotoxicity activity. No significant change in CD3+, CD4+, CD8+, and CD16+/CD56+ effector cell levels occurred following CHOP-R as assessed by multicolor flow cytometry.