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Combination of rituximab, bendamustine, and cytarabine for patients with mantle-cell non-Hodgkin lymphoma ineligible for intensive regimens or autologous transplantation

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Abstract

Purpose: The combination of bendamustine (B) and rituximab (R) is efficacious, with favorable toxicity in mantle-cell lymphoma (MCL). In this phase II study, we combined cytarabine with R and B (R-BAC) in patients with MCL age ≥ 65 years who were previously untreated or relapsed or refractory (R/R) after one prior immunochemotherapy treatment.

Patients and methods: In stage one, we established the maximum-tolerated dose (MTD) of cytarabine in R-BAC. In stage two, patients received R (375 mg/m(2) intravenously [IV] on day 1), B (70 mg/m(2) IV on days 2 and 3), and cytarabine (MTD IV on days 2 to 4) every 28 days for four to six cycles. The primary end point (overall response rate [ORR]) was evaluated by positron emission tomography. Secondary end points included safety, progression-free survival (PFS), response duration, and overall survival.

Results: Forty patients (median age, 70 years; 20 previously untreated patients) were enrolled; 93% had Ann Arbor stage III/IV disease; 49% had high Mantle Cell International Prognostic Index scores, with 15% blastoid histology. All R/R patients (35% refractory) had previously received R-containing regimens. The cytarabine MTD used in stage two was 800 mg/m(2), and R-BAC was well tolerated, with an 85% treatment completion rate. The major toxicity was transient grades 3 to 4 thrombocytopenia (87% of patients); febrile neutropenia occurred in 12%. The ORR was 100% (95% complete response [CR]) for previously untreated and 80% (70% CR) for R/R patients. The 2-year PFS rate (± standard deviation) was 95% ± 5% for untreated and 70% ± 10% for R/R patients.

Conclusion: R-BAC is well tolerated and active against MCL.

Trial registration: ClinicalTrials.gov NCT00992134.