Primary CNS lymphoma in HIV positive and negative patients: comparison of clinical characteristics, outcome and prognostic factors.

Bayraktar S, Bayraktar UD, Ramos JC, Stefanovic A, Lossos IS.
Division of Hematology and Oncology, Department of Medicine, University of Miami, Sylvester Comprehensive Cancer Center, 1475 NW 12th Ave D8-4, Miami, FL, 33136, USA.

Abstract
Primary central nervous system lymphoma (PCNSL) accounts for approximately 4% of all primary brain tumors and has a poor prognosis in both immunocompetent as well as in immuno compromised patients. We conducted a retrospective analysis to examine the clinical characteristics and prognostic factors in HIV-negative and HIV-positive patients with PCNSL and to assess the effect of highly active antiretroviral therapy (HAART) therapy on the outcome of HIV-positive patients. Patients diagnosed with PCNSL between 1999 and 2008 at our institution were divided into two groups based on their HIV status. Their demographic and clinical characteristics were compared using the chi-square test. Kaplan-Meier survival curves were constructed employing the univariate log-rank test. Multivariate analyses of survival were performed by Cox proportional hazards models incorporating the prognostic factors identified in the univariate log rank test. Forty-one HIV-positive patients and 45 HIV-negative patients were identified. HIV-positive patients were younger, more likely to present with seizures and elevated serum LDH levels. There were significant differences in complete remission (CR) rates (P = 0.010) and overall survival (OS) (P = 0.034) in favor of the HIV-negative group. In the HIV-positive group, OS was better in patients with KPS > 70 and patients who received HAART, but remained inferior to that in the HIV-negative patients. HIV-positive patients had a worse prognosis compared to HIV-negative patients despite similar clinical characteristics. Better performance status (KPS > 70) and treatment with HAART conferred better OS in HIV-positive patients.