A recent study has found that disparities exist in the delivery of chemotherapy to patients with non-Hodgkin lymphoma (NHL) who are positive for the human immunodeficiency virus (HIV) (Cancer. 2016;122:2689-2697). HIV-associated NHL is a serious complication of HIV infection, but in the era of highly effective combination antiretroviral therapy, data from several studies separate from the current one have indicated that its incidence has decreased and survival has increased. The authors of the current study set out to investigate chemotherapy use in the community, to correlate it with survival, and to compare it with recent changes in demographics and survival.

“Our data indicate that the epidemiology of HIV-associated lymphoma is changing, and groups with disparate clinical presentations and needs have emerged,” says Adam Olszewski, MD, assistant professor of medicine at the Alpert Medical School of Brown University in Providence, Rhode Island. “A deep partnership between clinicians and those patients, with a focus on all types of barriers to care, is of paramount importance.”

Dr. Olszewski and his colleagues used the National Cancer Data Base to identify HIV-positive patients with NHL between 2004 and 2012. HIV status has been included in the registry for patients with lymphoma since 2004. Among 321,850 patients with NHL, 3.3% (10,769 patients) were identified as being HIV positive. HIV-positive patients were younger, more often male, nonwhite, uninsured or insured with Medicaid, and residents of poorer economic areas, and more often had an advanced stage of disease or B symptoms compared with HIV-negative patients.

The most common types of NHL among HIV-positive patients were diffuse large B-cell lymphoma (DLBCL; 47%), Burkitt lymphoma (BL; 15%), unspecified lymphoma (13%), indolent B-cell lymphoma (10%), and primary central nervous system lymphoma (PCNSL; 9%). During the time period
analyzed, the number of HIV-associated lymphomas decreased from 1329 cases in 2004 to 896 cases in 2012.

Despite the decline in the number of cases overall, the number of BL cases remained approximately the same, significantly increasing the percentage of BL from 13% to 19% of HIV-related NHL cases. The median age of HIV-positive patients with NHL stayed the same, but the percentage of men increased from 75% to 81%. The drop in cases was significantly larger among white non-Hispanic patients (a 50% decrease from 729 cases to 357 cases) compared with white Hispanic patients (a 17% decrease from 178 cases to 147 cases) and black patients (a 7% decrease from 374 cases to 348 cases). As a result, in 2012, approximately 50% of men and 77% of women with HIV-associated NHL were black or Hispanic, a shift in demographics that was not observed in the HIV-negative NHL cases identified from the registry.

Treatment and Survival

Overall, 74% of patients in the study received chemotherapy for NHL. The percentage of HIV-positive patients who received chemotherapy did not change significantly for those with DLBCL, BL, or primary effusion lymphoma (PEL), but it increased significantly for those diagnosed with PCNSL after 2009.

In a multivariable model, several factors significantly associated with not receiving chemotherapy for HIV-associated DLBCL or BL, which require prompt treatment, were identified. The odds of not receiving chemotherapy increased with age and were higher in patients who were black, did not have private insurance, had DLBCL as opposed to BL, or had stage I disease. In addition, the risk of not being treated was lower in both academic institutions and nonacademic institutions in which at least 3 cases of HIV-associated NHL were treated per year.

Overall survival (OS) also was assessed for 4 NHL subtypes: DLBCL, BL, PCNSL, and PEL. With a median follow-up of 4 years, the median OS for these subtypes was 2 years, 2.2 years, 0.3 years, and 0.4 years, respectively. Not surprisingly, survival was better among patients who received chemotherapy versus those who did not receive chemotherapy, reaching statistical significance for all subtypes except PEL. In a trend analysis, the OS significantly improved over the study period for those patients with DLBCL, BL, and PCNSL (after 2009).

Implications

The study’s finding that receipt of chemotherapy varied by sociodemographic factors and by the type and case volume of the treatment center is important, the authors note, because the majority of Americans with HIV-associated lymphoma now are black or Hispanic, and administering chemotherapy correlates with survival. Because the status of a patient’s immune system is a critical factor in tolerating chemotherapy, Dr. Olszewski states that efforts to screen for and provide treatment for HIV infection, including antiretroviral therapy, will likely have the most impact in addressing disparities.

“[I] also believe that strengthening the partnership between HIV patients affected by cancer and the health care system that cares for them can prove helpful,” Dr. Olszewski says. “This might be achieved through a programmatic approach to support patients through diagnosis and treatment: tailored patient education; cooperation between primary care, infectious disease, and oncology specialists; social worker involvement; provision of safety nets with regard to insurance coverage; and access to care,” he says.

In an accompanying editorial, Clifford Gunthel, MD, an associate professor of medicine, and Mary Jo Lechowicz, professor and vice chair for education, hematology, and oncology, both of the Winship Cancer Institute at Emory University in Atlanta, Georgia, wrote, “As the future of HIV care moves more in the direction of HIV elimination and cure, it is not difficult to envision how the treatment of HIV-associated lymphoma could combine these goals. This may be the time to have the goal of dual cure—HIV and cancer—for our patients. We also should be addressing difficult issues of health care disparities, disease prevention, and long-term survivorship in this population.”

Further study is needed and ongoing. “Many researchers are studying the impact of Affordable Care Act policies on oncology care and related disparities,” Dr. Olszewski adds. “On the clinical side, novel chemotherapy regimens like the short-course EPOCH regimen (etoposide, prednisone, vincristine, doxorubicin, and cyclophosphamide), which are overall shorter, yet extremely efficacious, may facilitate treatment of HIV-associated lymphoma. The new AIDS malignancy consortium study evaluates an all-oral chemotherapy regimen that may provide an additional option for resource-poor settings throughout the world. Additionally, advocacy efforts on the part of the American Cancer Society, which aggressively funds research targeting health disparities, provide a critical support to address the issue.”

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