INFECTIOUS AGENTS AND CANCER

MEETING ABSTRACTS Open Access

HIV-associated primary lung cancer (LC) in the era of highly active antiretroviral therapy (HAART): a multi-institutional collaboration

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Background

HIV-infected individuals are at increased risk for primary LC. We wished to compare the clinico-pathologic features and treatment outcome of HIV-LC patients with HIV-negative LC patients. We also sought to compare smoking habits and immunologic features of HIV-LC patients with HIV-positive patients without LC.

Methods

A database of 75 HIV-positive patients with primary LC in the HAART era was established from an international collaboration. These cases were drawn from the archives of contributing physicians who subspecialize in HIV malignancies. Patient characteristics were compared with registry data from the Surveillance Epidemiology and End Results (SEER, n=169,091 participants) Program and with HIV-positive individuals without LC from the Adult and Adolescent Spectrum of HIV-related Diseases (ASD, n=36,569 participants) Project.

Results

The median age at HIV-related LC diagnosis was 50 years compared to 68 years for SEER participants (p<0.001). HIV-LC patients, like their SEER counterparts, most frequently presented with stage III (29% vs. 32%) and stage IV (55% vs. 48%) cancers, usually with adenocarcinoma (41% vs. 37%) or squamous carcinoma (32% vs. 20%) histologies. HIV-LC patients and ASD participants had comparable median nadir CD4+ cell counts (138 vs. 160 cells/μL). HIV-LC patients were, however, more likely to be smokers (99% vs. 76%; p<0.001) with a higher median pack-year history of cigarette consumption (41 vs. 14 pack-years; p<0.001). At LC diagnosis, their median CD4+ count was 340 cells/μL and 86% were receiving HAART. Sixty-three (84%) HIV-LC patients received cancer-specific treatments, but chemotherapy-associated toxicity was substantial. The median survival among HIV-LC patients and SEER participants both measured 9 months.

Conclusions

Smoking was tightly associated with the risk of HIV-LC. Most HIV patients were receiving HAART and had substantial immune reconstitution at time of LC diagnosis. They were able to receive LC treatments; their tumor types and overall survival were similar to SEER LC participants. However, HIV-LC patients were diagnosed with LC at a younger age than their HIV-negative counterparts. Future research should explore how screening and diagnostic and treatment strategies directed toward the general population may apply to HIV-positive patients at risk for LC.

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