Research Highlights

Cynthia R. King, PhD, NP, MSN, RN, FAAN
Associate Editor

Study Compares Kaposi Sarcoma in Transplant Recipients and Patients With HIV

With increases in organ transplantation and the spread of AIDS, epidemiologists have noted a concurrent rise in the risk of virus-related cancers in transplant recipients and patients with HIV. Kaposi sarcoma (KS) is one of the most common of the virus-related cancers, the etiology of which is human herpes virus type 8.

Serraino et al. (2005) used already available demographic information from three longitudinal databases in France and Italy to compare the epidemiologic patterns of the development of KS in patients with AIDS with those of KS in transplant recipients. DMI-2 HIV is the national database of HIV-positive individuals with access to hospital care in France. The investigators looked at the information on 6,072 patients who were entered into the database from January 1988–June 2004 and were followed by Nice University Hospital for a median of 3.5 years. The database does not contain information on when patients seroconverted to HIV-positive status or how long they had been HIV positive prior to being entered into the database. As such, the usefulness of the data to the full study is limited.

The Italian HIV Seroconversion Study (ISS) is a multicenter study looking at the natural history of HIV infection. Patients in the database were followed an average of 8.1 years. Unlike patients in France's national database, patients in this study have documented seronegative tests and positively confirmed HIV tests. The maximum time accepted between the negative and positive tests is three years, and the midpoint between the two tests is taken as the estimated date of seroconversion. Thus, the Italian database includes an estimated length of HIV positivity. Excluded from the AIDS arm of the study were people diagnosed with KS within two months of enrollment in the study. A total of 2,002 patients who had seroconverted to HIV positive were included from Italy.

Information was collected on 2,705 organ recipients from 1970–2004 (1,844 renal, 702 cardiac, and 159 liver) in the organ transplantation databases of four Italian transplant centers. Patients were followed for a median of 5.5–7.9 years. Dates and times of follow-up varied slightly with each center. The risk of KS in patient years was calculated from the time of transplant until development of KS, death from another cause, or date of last visit, whichever came first. Patients who died within 10 days of transplant, who developed KS within 30 days of transplant (believed to be prevalent cases), or who had a pretransplant history of any cancer were excluded from the study.

The current study compared the risk of developing KS between the two groups using person years. In the HIV population, person years were calculated from the date of enrollment in the databases to the date of diagnosis of KS for those who developed it, or the date of death or date of last follow-up for those who had not developed KS by the end of the study. In organ transplant patients, patients were considered at risk for KS starting from transplant and ending at KS diagnosis, death, or date of last follow-up, whichever occurred first.

Among the 10,799 subjects who were followed for a total of 65,739 patient years, 356 cases of KS were diagnosed: 317 in patients with HIV and 39 in patients following transplants. Patients with HIV had a 451-fold higher risk for KS than the general population. In the HIV-positive population, homosexual men had a higher risk than women or IV drug users. CD4+ counts greater than 200 and use of highly active antiretroviral therapies (HAARTs) were associated with reduced incidence of KS.

In transplant recipients, risk was 128-fold higher than in the general population. Among transplant recipients, being younger than 50 years old and female resulted in reduced risk. KS risk was 2.7-fold higher in liver transplant recipients than in renal transplant recipients. Although cardiac transplant recipients have the most aggressive immunosuppressive regimen, their risk was no higher than those receiving renal transplants. No reason was provided. The risk for KS declined as the number of years following transplant increased.

When comparing patients with HIV to transplant recipients, researchers found that KS developed earlier in those receiving transplants. Four years post-transplant, KS developed in a pattern similar to patients with HIV who seroconverted following HAART (e.g., a decline of incidence in both). In looking at patients who became HIV positive before taking HAART, the development of KS is strongly associated with the duration of HIV infection, which is assumed to correlate with a decline in immunocompetency.

In conclusion, when comparing transplant recipients with patients with HIV, data show strong correlation between degree of immunosuppression in both groups and KS.

Serraino, D., Angeletti, C., Carrieri, M.P., Long, B., Piche, M., Piselli, P., et al. (2005). Kaposi's sarcoma in transplant and HIV-infected patients: An epidemiologic study in Italy and France. *Transplantation, 80,* 1695–1704.

Combined Therapies in Patients With AIDS-Related Lymphoma Are Safe and Improve Survival

Because of the introduction of highly active antiretroviral therapy (HAART), morbidity and mortality rates of AIDS-related lymphoma (ARL) have been greatly reduced. Because HAART improves survival and quality of life for patients with AIDS, assuming that it should not be withheld during chemotherapy treatment is logical. However, combining HAART with standard cyclophosphamide, doxorubicin, vincristine, and prednisolone (CHOP) therapy posed a potential risk for increased, possibly fatal, toxicities. Therefore, the German ARL Study Group decided to determine whether using HAART along with CHOP to treat ARL is efficacious and which patients can be treated safely with the modality.

One hundred fifty-seven patients with HIV and aggressive B-cell lymphomas registered to participate from 1997–2001. Registrants had their lymphomas staged according to Ann Arbor Classification, and standard HIV laboratory work was performed prior to acceptance into the study. Exclusionary factors included Ann Arbor IA lymphomas (not stage IE) or central nervous system lymphomas; treatment with chemotherapy or cytokines

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