

Postoperative mortality rates low among patients with HIV prescribed ART

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Postoperative mortality rates were low among patients infected with the human immunodeficiency virus (HIV) who are receiving antiretroviral therapy (ART), and those mortality rates were influenced as much by age and poor nutritional status as CD4 cell counts, according to a report published online by *JAMA Surgery*.

ART has helped turn HIV into a chronic disease so patients with HIV are now candidates for a range of surgical procedures. However, the relationship between improved overall survival and short-term surgical outcomes is unclear, according to the study background.

Joseph T. King, Jr., M.D., M.S.C.E., of the Veterans Affairs Connecticut Healthcare System, West Haven, and coauthors analyzed nationwide electronic medical record data from the U.S. Veterans Health Administration Healthcare System from 1996 to 2010 to compare 30-day postoperative mortality in patients with HIV and receiving ART with mortality rates for uninfected patients. Data on 1,641 patients with HIV and receiving ART who were undergoing inpatient surgery were compared with data on 3,282 uninfected patients matched by procedures.

Data revealed the most common procedures in both groups were cholecystectomy (gall bladder removal, 10.5 percent), hip arthroplasty (hip replacement, 10.5 percent), spine surgery (9.8 percent), herniorrhaphy (hernia repair, 7.4 percent) and coronary artery bypass grafting (7 percent). In patients with HIV, CD4 cell counts (a marker of

immune system function) were 80 percent with 200/ μ L or more, 16.3 percent with 50/ μ L to 199/ μ L, and 3.7 percent with less than 50/ μ L; 74.1 percent of HIV-infected patients also had undetectable levels of HIV-1 RNA (viral suppression).

Study results show HIV-infected patients had 30-day postoperative mortality rates of 3.4 percent (56 patients) compared with 1.6 percent (53 patients) for uninfected patients. Patients with HIV had increased mortality across all CD4 cell count levels compared with uninfected patients. Factors also strongly associated with mortality were poor nutritional status (hypoalbuminemia) and age.

"For example, after adjustment, HIV-infected individuals with a CD4 cell count higher than 200/ μ L can be expected to have a postoperative mortality rate similar to that in an uninfected individual 16 years older: surgery on a 50-year-old patient with HIV infection who is receiving ART has a 30-day mortality risk similar to that of a 66-year-old individual without the infection," the authors note.

However, the authors caution the association between HIV infection, CD4 cell count and mortality must be viewed in context: "Many uninfected patients have postoperative risks that exceed those of HIV-infected patients with CD4 [cell counts](#) above 200/ μ L. For example, a 45-year-old HIV-infected patient with a CD4 cell count of 200/ μ L or more had a lower rate of 30-day postoperative mortality than did any 65-year-old uninfected patient or a 45-year-old uninfected patient with hypoalbuminemia."

The study concludes: "Clinicians and patients should consider HIV infection and CD4 cell count as just two of many factors associated with surgical outcomes that should be incorporated into surgical decision making."

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