

13th Conference on Retroviruses and Opportunistic Infections



Denver, Colorado - February 5-8, 2006

NON-AIDS RELATED MORTALITY RISK EXCEEDS AIDS-RELATED MORTALITY AMONG INJECTING DRUG USERS WITH CD4⁺ COUNTS ABOVE 200 CELLS/mm³

Conf Retrovir Opportunistic Infect 2006 Feb 5-8;13:abstract no. 29

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BACKGROUND: In the current HAART era, individuals may be less likely to die due to AIDS-related causes than in previous eras. By not properly accounting for the competing risk of dying due to an AIDS-related cause, standard survival methods are likely to overestimate the non-AIDS related mortality risk.

METHODS: The risk of mortality (all-cause, AIDS-related, and non-AIDS related) were estimated in the Johns Hopkins HIV Clinical Cohort, an observational clinic-based cohort in Baltimore, MD. Competing risk methods were used to determine the cumulative AIDS-related and non-AIDS related mortalities.

RESULTS: With the introduction of HAART, all-cause mortality declined from 112 deaths/1000 person-years (PY) in 1995 to 39 deaths/1000 PY in 1997, but has remained stable since. However, AIDS-related mortality has declined (p -value for trend=0.008) to approximately 20.22 (95% CI: 14.86-26.90) deaths/1000 PY in 2003, whereas non-AIDS related mortality has risen (p -value for trend<0.001) to a high of 22.73 (95% CI: 17.17-29.52) deaths/1000 PY in 2003. Competing risk analyses indicate that the risk of dying in the current era of HAART due to AIDS-related causes remains significantly higher than non-AIDS related causes (3-year cumulative mortality: 15.7 vs. 4.2%; 95% CI for difference between cumulative mortalities 8.6-14.4%) for patients who enrolled in the clinic with CD4 counts <200 cells/mm³. In contrast, non-AIDS related mortality was greater than AIDS-related mortality for those with CD4 >200 cells/mm³. This higher non-AIDS mortality was observed among injecting drug users (IDU) with a 5-year cumulative mortality of 14.0 (95% CI: 6.7-21.4), 8.1 (95% CI: 0.5-15.7), and 13.5 (95% CI: 5.3-21.7) percent for those with CD4 counts between 200-350, 350-500, and >500 cells/mm³ respectively, as compared to AIDS-related 5-year cumulative mortality of 4.6 (95% CI: 0.2-8.9), 6.3 (95% CI: 0.0-13.2), and 1.7 (95% CI: 0.0-4.9) percent. Other transmission

risk categories had similar AIDS and non-AIDS related cumulative mortalities. Standard Kaplan-Meier methods overestimated the risk of cause-specific mortality by up to 21%.

CONCLUSIONS: Competing risk analyses indicate that non-AIDS related mortality exceeds AIDS-related mortality for those enrolling with higher CD4 counts, especially among IDU. Efforts to reduce mortality among HIV-infected populations will be hampered unless attention is also directed towards conditions that may not traditionally be considered HIV-related.

2006-02-05
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