

(513) - Mortality Of HIV-Infected Patients Receiving Highly Active Antiretroviral Therapy In Lower-Income Countries: Comparison With General Populations

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Abstract:

Background: HIV-related mortality has been substantially reduced in developing countries among patients starting HAART. Since non-HIV related mortality may also vary, we standardized mortality estimates to those in the general population.

Methods: We included treatment-naive patients from 10 countries including South Africa who started treatment with at least 3 ARVs. Follow-up was censored at 12 months. Standardized Mortality Ratios (SMRs) of deaths from all causes were calculated using country-, gender- and age-specific mortality estimates stratified by age, sex, baseline CD4, treatment regimen and stage of disease.

Results: A total of 123 deaths were recorded in 2644 patients during 2175 person-years of follow-up. The overall SMR was 3.12 (95%CI: 2.62-3.73). SMRs varied with age: 2.8 (1.9-4.2) for age 40-49 compared to 3.8 (2.6-5.6) for age 16-29, and sex: 3.4 (2.6-4.4) for men and 2.9 (2.3-3.7) for women, but CIs overlapped. SMRs were similar for different HAART regimens. SMRs declined with increasing baseline CD4 cell counts: CD4 counts < 25 or >350 cells/l were associated with an SMR of 7.4 (5.6-9.9) and 0.8 (0.3-2.2), respectively. Mortality in patients with CD4 < 200 was higher than that in the general population. Advanced stage of disease was associated with an SMR of 4.8 (3.9-5.9), while mortality in patients with less advanced stage of disease was close to that expected for the general population (SMR 1.1, 95%CI 0.6-2.0). SMRs declined with time on HAART, from 8.3 (5.9-11.7) in the first month to 1.5 (1.04-2.2) over months 7-12.

Conclusions: SMRs remove variance in mortality due to extraneous causes and may thus strengthen inferences about the impact of ART in lower-income countries. Our analysis may have been affected by under-ascertainment of deaths in HIV cohorts and increased HIV-related mortality in the reference population. In collaboration with WHO, estimates of SMRs will be revised using HIV-free reference data.