

Ten-year survival with analysis of gender difference, risk factors, and causes of death during 13 years of public antiretroviral therapy in rural Kenya.

Abstract

Evidence for why antiretroviral therapy (ART) outcomes differ by gender in developing countries has been inconclusive. In this first study to assess 10-year survival on ART in Kenya, our objective was to compare gender differences in survival for those who began ART as adults and as children. Kakamega County Referral Hospital (KCRH) is a tertiary rural hospital that has provided public ART to Kenyans since 2004. All patients enrolled in ART at KCRH who died between July 2004 and March 2017 and a sample of living patients were included in a survival analysis that bootstrapped sampled data. Case-cohort regressions identified adjusted hazard ratios. In total, 1360 patients were included in the study. Ten-year survival was 77% (95% confidence band [CB] 73-81%), significantly different for men (65%; 95% CB: 45-74%) and women (83%; 95% CB: 78-86%) who began therapy as adults. Ten-year survival was intermediate with no significant gender difference (76%; 95% CB: 69-81%) for patients who began therapy as children. Hazard of death was increased for men (hazard ratio [HR] 1.56; 95% confidence interval [CI] 1.13-2.17), infants (HR 2.87; 95% CI 1.44-5.74), patients with consistently poor clinic attendance (HR 3.94; 95% CI 3.19-4.86), and divorced patients (HR 2.25; 95% CI 1.19-4.25). Tuberculosis, diarrheal illnesses, human immunodeficiency virus (HIV) wasting syndrome, and malaria were leading causes of death. Survival was significantly lower for men than for women in all time periods, but only for patients who began therapy as adults, indicating against biological etiologies for the gender mortality difference.

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