

Risk of HIV-1 in rural Kenya: a comparison of circumcised and uncircumcised men

Abstract:

BACKGROUND: Most studies that have found an association between uncircumcised status and infection with human immunodeficiency virus type 1 (HIV-1) have compared participants from various demographic backgrounds, among which the prevalence of other risk factors might have varied. We report findings from a study conducted among men within a single ethnic community in which circumcision was dictated by the religious denomination to which the men belonged.

METHODS: Of the 1217 eligible men, we included in the analysis 845 who gave blood samples for HIV-1 testing and who were confirmed as either fully circumcised (n = 398) or uncircumcised (n = 447). The seroprevalence of HIV-1 was compared between the 2 groups.

RESULTS: All correlates of HIV-1 prevalence that we measured were distributed similarly between circumcised and uncircumcised men. The seroprevalence of HIV-1 was 30% among the uncircumcised men and 20% among the circumcised men. Among uncircumcised men, HIV-1 seroprevalence was similar between men from circumcising denominations (31%; n = 111) and noncircumcising denominations (30%; n = 336). The crude prevalence ratio for HIV infection associated with not being circumcised was 1.5 (95% confidence interval = 1.2-2.0); and adjustment for other measured risk factors for HIV-1 infection had little impact on this result.

CONCLUSION: Our study provides evidence that circumcision is associated with a reduced risk of HIV-1 infection