

Risk compensation is not associated with male circumcision in Kisumu, Kenya: a multi-faceted assessment of men enrolled in a randomized controlled trial

Abstract:

Three randomized controlled trials (RCTs) have confirmed that male circumcision (MC) significantly reduces acquisition of HIV-1 infection among men. The objective of this study was to perform a comprehensive, prospective evaluation of risk compensation, comparing circumcised versus uncircumcised controls in a sample of RCT participants. **METHODS AND FINDINGS:** Between March 2004 and September 2005, we systematically recruited men enrolled in a RCT of MC in Kenya. Detailed sexual histories were taken using a modified Timeline Followback approach at baseline, 6, and 12 months. Participants provided permission to obtain circumcision status and laboratory results from the RCT. We evaluated circumcised and uncircumcised men's sexual behavior using an 18-item risk propensity score and acquisition of incident infections of gonorrhoea, chlamydia, and trichomoniasis. Of 1780 eligible RCT participants, 1319 enrolled (response rate = 74%). At the baseline RCT visit, men who enrolled in the sub-study reported the same sexual behaviors as men who did not. We found a significant reduction in sexual risk behavior among both circumcised and uncircumcised men from baseline to 6 ($p < 0.01$) and 12 ($p = 0.05$) months post-enrollment. Longitudinal analyses indicated no statistically significant differences between sexual risk propensity scores or in incident infections of gonorrhoea, chlamydia, and trichomoniasis between circumcised and uncircumcised men. These results are based on the most comprehensive analysis of risk compensation yet done. **CONCLUSION:** In the context of a RCT, circumcision did not result in increased HIV risk behavior. Continued monitoring and evaluation of risk compensation associated with circumcision is needed as evidence supporting its' efficacy is disseminated and MC is widely promoted for HIV prevention