

Abstract

BACKGROUND:

Intravaginal practices including vaginal washing have been associated with HIV-1 acquisition. This association may be mediated by mucosal disruption, changes in vaginal flora or genital tract inflammatory responses. Reducing vaginal washing could lower women's risk of HIV-1 acquisition.

METHODS:

23 HIV-1 seronegative women who reported current vaginal washing were recruited from a prospective cohort study of high-risk women in Mombasa, Kenya. A theoretical framework including information-motivation-behavioural skills and harm reduction was implemented to encourage participants to reduce or eliminate vaginal washing. At baseline and after 1 month, we evaluated vaginal epithelial lesions by colposcopy, vaginal microbiota by Nugent's criteria and vaginal cytokine milieu using ELISA on cervicovaginal lavage specimens.

RESULTS:

The most commonly reported vaginal washing substance was soap with water (N=14, 60.9%). The median frequency of vaginal washing was 7 (IQR 7-14) times per week. After 1 month, all participants reported cessation of vaginal washing (p=0.01). The probability of detecting cervicovaginal epithelial lesions was lower (OR 0.48; 95% CI 0.20 to 1.16; p=0.10) and the likelihood of detecting *Lactobacillus* by culture was higher (OR 3.71, 95% CI 0.73 to 18.76, p=0.11) compared with baseline, although these results were not statistically significant. There was no change in the prevalence of bacterial vaginosis. Most cytokine levels were reduced, but these changes were not statistically significant.

CONCLUSIONS:

A theory-based intervention appeared to have a positive effect in reducing vaginal washing over 1 month. Larger studies with longer follow-up are important to further characterise the effects of vaginal washing cessation on biological markers.