

ABSTRACT

Background

Clinical development of vaginally applied products aimed at reducing the transmission of HIV and other sexually transmitted infections, has highlighted the need for a better characterisation of the vaginal environment. We set out to characterise the vaginal environment in women in different settings in sub-Saharan Africa.

Methods

A longitudinal study was conducted in Kenya, Rwanda and South-Africa. Women were recruited into pre-defined study groups including adult, non-pregnant, HIV-negative women; pregnant women; adolescent girls; HIV-negative women engaging in vaginal practices; female sex workers; and HIV-positive women. Consenting women were interviewed and underwent a pelvic exam. Samples of vaginal fluid and a blood sample were taken and tested for bacterial vaginosis (BV), HIV and other reproductive tract infections (RTIs). This paper presents the cross-sectional analyses of BV Nugent scores and RTI prevalence and correlates at the screening and the enrolment visit.

Results

At the screening visit 38% of women had BV defined as a Nugent score of 7–10, and 64% had more than one RTI (*N. gonorrhoea*, *C. trachomatis*, *T. vaginalis*, syphilis) and/or *Candida*. At screening the likelihood of BV was lower in women using progestin-only contraception and higher in women with more than one RTI. At enrolment, BV scores were significantly associated with the presence of prostate specific antigen (PSA) in the vaginal fluid and with being a self-acknowledged sex worker. Further, sex workers were more likely to have incident BV by Nugent score at enrolment.

Conclusions

Our study confirmed some of the correlates of BV that have been previously reported but the most salient finding was the association between BV and the presence of PSA in the vaginal fluid which is suggestive of recent unprotected sexual intercourse.