Inflammatory cytokine biomarkers to identify women with asymptomatic STIs and BV who are at high risk of HIV infection

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Introduction
Sexually transmitted infections (STIs) and bacterial vaginosis (BV) are associated with increased risk of HIV acquisition (Misana et al., 2012). An estimated 23% of new HIV infections in women in 2010 could be attributed to curable STIs (chlamydia, gonorrhoea, trichomoniasis), BV and candida (Johnson et al., 2012). In South Africa (and other resource-limited settings), women are only tested for STIs/BV if they visit a clinic with signs or symptoms (syndromic management). However, STIs are often asymptomatic in women (Wkinson et al., 1999; Misana et al., 2012), with vaginal discharge evident in only 11.8% of women with a discharge-causing STI. Women with STIs who do not have clinical signs have the same level of genital inflammation as women with clinical signs which is elevated compared to STI/BV-negative women (Misana et al., 2012). A large proportion of women who have inflammatory infections are not being treated. Because of the relationship between STIs/BV and HIV risk (as well as reproductive complications), it is important to develop new, inexpensive strategies to better manage these conditions.

We aimed to (i) investigate whether cytokines in the female genital tract can be used to identify women with any one of several common asymptomatic STIs and BV and (ii) use cytokine biomarkers to develop an inexpensive, easy-to-use point-of-care test for STIs/BV that can be used together with syndromic management protocol to improve STI/BV management in resource-limited settings.

Study design

Results

Conclusions

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