Asymptomatic Sexually Transmitted Infections among Men Who Have Sex With Men In Cape Town

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Introduction

Men who have sex with men (MSM) are at high risk of HIV and sexually transmitted infection (STI) transmission compared to their heterosexual peers1,2,3,4. Reasons for this are complex and include high biological risk of HIV transmission during unprotected receptive penile-anal sex (compared to penile-vaginal sex)2. History of prior STIs is associated with increased HIV vulnerability among MSM5. Treating STIs is recommended as an HIV risk-reduction strategy for this key population5.6. A significant proportion of STIs are likely to be asymptomatic in MSM and remain undiagnosed and untreated and could be contributing to the high HIV rates5,6,7. We undertook this study to describe symptomatic and asymptomatic STIs in a clinical MSM cohort in Cape Town.

Methods

This study was performed at the Ivan Toms Centre for Men’s Health in Cape Town, a primary level, MSM-targeted HIV and STI clinic which receives support and funding from PEPFAR/USAID and is operated by the Anova Health Institute in partnership with the Western Cape Department of Health. A convenience sample of 200 MSM >16 years of age was prospectively recruited between Jan-June 2012 from this clinic. All MSM attending the clinic during this period were offered study enrolment. Consented participants underwent symptom and clinical screening for STIs. Urine, pharyngeal and anal twist specimens were collected for STI analysis, and blood collected for HIV and syphilis rapid testing screening. A detailed psychosocial and sexual questionnaire was completed. STI specimens were analysed for gonorrhoea and chlamydial infection using the Aptima 2 Combo PCR kit (GenProbe, USA) HIV screening utilised the SD Bioline HIV 1/2 3.0 test (Standard Diagnostics, Korea). Positive results were confirmed using the Apre Determinate HIV-1/2 kit (Alera Medical, Japan). Gonorrhoea was treated with oral cefixime and chlamydial infection with doxycycline as per in-country guidelines7,8,9. HIV-positive patients were linked to care within the clinic.

Results: Baseline Epidemiology

200 MSM were recruited with a median age of 32 years (IQR 26-39.5). All participants were resident in Cape Town during the study period. Enrolled MSM were generally educated (73% had completed high school; 42% had a tertiary level qualification) and 66% of the participants were employed in full or part-time work. Their median number of sex partners in the year prior to the study was 5 (IQR 2-20). 155 (78%) had sex exclusively with men while 45 (23%) reported sex with men and women. 77 (38.5%) reported any transactional sex. 88 (44%) were HIV-positive at study entry and another 8 participants (4%) were not previously known to be positive but tested positive during the first study visit.

Overall, 63 (31%) screened positive for either gonorrhoea or chlamydial at any anatomical site. Asymptomatic infection was more common than symptomatic infection irrespective of clinical site, 48 (24%) versus 15 (7.5%) respectively (p = 0.008). The anus was the most commonly affected site, followed by the pharynx and then the urethra.

Conclusions

Results from this study demonstrate a high prevalence of symptomatic and asymptomatic sexual infections in the study population (64%). The majority of incident gonorrhoea and chlamydial STIs were asymptomatic and non-urethral. These infections would not have been detected using South Africa’s current syndromic STI diagnosis and empiric treatment guidelines which do not consider non-urethral or asymptomatic infections. Undetected, and therefore untreated, sexual infections could be a significant driver of high HIV rates among African MSM. These data demonstrate the importance of implementing directed STI screening for MSM or if this is not feasible, implementing the World Health Organization’s recommendations for managing asymptomatic STIs among MSM exhibiting high risk sexual behaviours.