

However, significant associations were observed in MSM with anal HPV 16 (with coinfection—AOR, 10.94, 95% CI, 1.18 to 101.68; without—AOR, 4.96, 95% CI, 1.40 to 17.57).

Conclusion We found type-specific associations of HPV 6 and 16 seropositivity with prevalent anal HPV infection, but not with prevalent genital HPV infection alone. Anal HPV 6 infection was associated with seropositivity in both MSW and MSM, while anal HPV 16 infection was only associated with seropositivity in MSM. Our data suggest that, in men, anal HPV infection may be more efficient than genital HPV infection in inducing immune responses. This may have relevance for protective immunity or the lack thereof, conferred by natural infection.

Epidemiology poster session 1: STI trends: *Mycoplasma genitalium*

P1-S1.56 THE INCIDENCE OF *MYCOPLASMA GENITALIUM* IN A COHORT OF YOUNG AUSTRALIAN WOMEN

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Background *Mycoplasma genitalium* (Mg) is an emerging sexually transmitted infection that has been associated with serious upper genital tract infections in women such as cervicitis, pelvic inflammatory disease and endometritis. The burden of disease for Mg in Australia is unknown as there are no current population prevalence or incidence data.

Methods Women aged 16–25 years were recruited from sexual health clinics (SHC) and general practice clinics (GP) in South-Eastern Australia and consented to participate in a 12-month study providing vaginal swabs through the mail. Women were tested at 6-monthly intervals for chlamydia and Mg.

Results Overall, 1116 women were recruited from 29 clinics; with 79% of women retained at the conclusion of the study. The prevalence of Mg at recruitment was 2.4% (95% CI 1.5 to 3.3). Increased numbers of sexual partners was strongly associated with Mg (adjusted OR [AOR]=2.2; 95% CI 1.0 to 4.6), as was being recruited from SHC (AOR=3.4; 95% CI 1.5 to 5.3). Mg incidence was 1.2 per 100 women years (95% CI 0.7 to 2.1) and was associated with women recruited from SHC (HR=4.9; 95% CI 1.5 to 16.3) and having increased numbers of new sexual partners (HR=5.7; 95% CI 1.4 to 23.1). We found a median organism load of $1.4 \times 10^3/5\text{P}$, which was 100 times less than that found in chlamydia positive samples. We also found an azithromycin failure rate of 15% (95% CI 3.2 to 37.9).

Conclusion Mg is common in young Australian women, and consistent with international studies, Mg was less prevalent than chlamydia.

P1-S1.57 EPIDEMIOLOGY OF *MYCOPLASMA GENITALIUM* AND GENITAL HIV-1 RNA - A LONGITUDINAL STUDY AMONG HIV-INFECTED ZIMBABWEAN WOMEN

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Background *Mycoplasma genitalium* (MG) is an emerging STI associated with reproductive tract syndromes in men and women, and

with HIV in cross-sectional studies. MG is common in HIV-infected women, but there have been no longitudinal studies of MG and genital HIV RNA among HIV-infected women.

Methods The study is nested in a cohort of 131 HIV-infected, ART-naïve Zimbabwean women aged 19–37 years. Real-time PCR was used to test for presence and quantity of MG DNA in 420 stored cervical samples (1–4 visits per woman). Genital and plasma HIV viral load, CD4 count and presence of other STI and reproductive tract infections were collected at each visit, together with clinical and behavioural data. Logistic and linear random-effects models were used to analyse i) factors associated with detection of MG, and ii) the association of detection and quantity of MG with detection and quantity of genital HIV RNA.

Results MG was detected at 44/420 (10.5%) visits, with a median bacterial load of 1497 copies/ml (range <300–3 240 000 copies/ml). MG was twice as prevalent as *N gonorrhoeae* (5.0%) or *C trachomatis* (4.8%). Of the 33 women with MG detected at least once, six were infected at ≥ 2 consecutive visits, persisting for up to 43 weeks. In multivariable analyses, MG was independently associated with bacterial vaginosis (OR=2.24, 95% CI 1.03 to 4.85), HSV2 (OR=8.56, 95% CI 0.99 to 74.24) and younger age (OR=2.92, 95% CI 1.10 to 7.76). Cleaning inside the vagina was protective against MG infection (OR=0.33, 95% CI 0.15 to 0.71). Genital HIV RNA was detected at 237/397 (59.7%) visits, with a mean viral load of 5.14 log₁₀ copies/ml. MG was independently associated with detection of genital HIV RNA (OR=2.73, 95% CI to 1.02–7.33) after adjusting for confounders including plasma viral load, CD4 count, HSV2, and *N gonorrhoeae*. Higher MG bacterial load was weakly associated with detection of genital HIV RNA (OR=1.75, 95% CI 0.96 to 3.19) but there was little association with quantity of HIV RNA.

Conclusions This cohort study confirms previous cross-sectional results showing an association of genital HIV DNA detection with MG infection. Further research is needed to explore factors mediating this association, as MG was not associated with plasma viral load or measured markers of inflammation. The growing evidence for an association of MG with HIV genital shedding, and the high prevalence and persistence of MG infection, suggests that screening and treatment of MG may be warranted among HIV-positive women.

Epidemiology poster session 2 : Population: Commercial sex worker

P1-S2.01 PREVALENCE OF HIV AND SEXUALLY TRANSMITTED INFECTIONS AMONG CLIENTS OF FEMALE SEX WORKERS IN KARNATAKA, SOUTH INDIA

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Introduction Several studies have demonstrated the importance of commercial sex work in the transmission of HIV and other sexually transmitted infections (STIs) in India. Clients of female sex workers (FSWs) are thought to be an important bridging population for HIV and STIs. However, there is little information on basic characteristics of sex work clients. This study sought to describe the prevalence of HIV and other STIs, as well as examine the determinants of these pathogens, among a sample of clients in south India.

Methods Data were from a cross-sectional biological and behavioural survey of FSW clients from six districts in Karnataka State, India. The prevalence of HIV, syphilis, herpes simplex virus type 2 (HSV-2), chlamydia (CT) and gonorrhoea (GC) among clients was