

INFECTIOUS CAUSES OF CERVICITIS IN WOMEN ATTENDING MELBOURNE SEXUAL HEALTH CENTRE, 2011-2021

Authors:

Nguyen TV^{1,2}, Bradshaw CS^{1,2,3}, Plummer EL^{1,2}, Fairley CK^{1,2}, Chow EPF^{1,2,3}, Phillips T^{1,2}, Vodstrcil LA^{1,2,3}

¹ Central Clinical School, Monash University, Melbourne, Victoria, Australia

² Melbourne Sexual Health Centre, Alfred Health, Melbourne, Victoria, Australia

³ Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Victoria, Australia

Background: Women with cervicitis may experience serious complications including pelvic inflammatory disease and infertility. While *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are established causes of cervicitis, the cause is not always identified. *Mycoplasma genitalium* and bacterial vaginosis (BV) can also cause cervicitis, however, their contribution is unknown. This study aimed to determine the infectious causes of cervicitis among Melbourne Sexual Health Centre attendees over the past decade.

Methods: We undertook a retrospective audit of cervicitis cases between 1st March 2011-1st March 2021. Women completed a computer assisted interview capturing demographic and behavioural characteristics and underwent a clinical examination. The proportion of cervicitis cases diagnosed with *C.trachomatis*, *N.gonorrhoeae*, *M.genitalium* and BV was calculated with 95% confidence intervals (CIs). Factors associated with having each infection with cervicitis were determined using logistic regression. Trends in testing and detection of each infection overtime were assessed.

Results: Of 813 cases of cervicitis, 226/729 (31%, 95%CI: 28%-35%) had BV, 163/809 (20%, 95%CI: 17%-23%) had *C.trachomatis*, 48/747 (6%, 95%CI: 5%-8%) had *M.genitalium*, and 13/793 (2%, 95%CI: 1%-3%) had *N.gonorrhoeae*. 211/813 women with cervicitis had no infectious cause identified. Women aged >24-years-old were less likely to have chlamydial-cervicitis (adjusted[A]OR)=0.60, 95%CI: 0.39-0.91, p=0.016). The proportion of women with cervicitis tested for *M.genitalium* increased from 84% in 2011 to 96% in 2019 ($P_{\text{trend}}=0.006$), and detection increased from 3% to 7% ($P_{\text{trend}}=0.046$), with an average 17% increase annually (AOR=1.17, 95%CI: 1.04-1.31, p=0.008). The proportion with cervicitis tested for BV did not change overtime, but detection of BV increased from 32% in 2011 to 45% in 2019 ($P_{\text{trend}}<0.001$), with an average 11% increase annually (AOR=1.11, 95%CI: 1.05-1.18, p<0.001).

Conclusions: Among women diagnosed with cervicitis at MSHC, BV was the most common infection, followed by *C.trachomatis* and *M.genitalium*. Women with cervicitis should be tested for BV and *M.genitalium* to ensure appropriate antibiotics are prescribed.

Disclosure of Interest Statement:

CSB and CSK are supported by an Australian NHMRC Leadership Investigator Grant (GNT1173361 and GNT1172900, respectively). EPFC is supported by an NHMRC Emerging Leadership Investigator Grant (GNT1172873).