Abstract:

Female sex workers in Nairobi were prospectively evaluated for risk factors of incident Chlamydia trachomatis infection. Independent risk factors included cervical ectopy (P=.007), gonococcal infection (P=.002), human immunodeficiency virus (HIV) seropositivity (P=.003), HIV seroconversion (P=.001), and duration of prostitution (P=.002). Eighteen different C. trachomatis outer membrane protein (omp1) genotypes were identified, with the allelic composition of the C. trachomatis population changing significantly over time (P=.005). Seventeen of 19 reinfections > or = 6 months apart were with different C. trachomatis omp1 genotypes. Women with HIV infection had an increased proportion of visits with C. trachomatis infection (P=.001) and an increased risk of reinfection (P=.008). Overall, the data demonstrate significant fluctuations in the genotype composition of the C. trachomatis population and a reduced rate of same-genotype reinfection consistent with the occurrence of strain-specific immunity.