

Rapid increase of both HIV-1 infection and syphilis among pregnant women in Nairobi, Kenya

Abstract:

OBJECTIVE: To determine the prevalence of HIV-1 and syphilis antibodies in a population of pregnant women in Nairobi, Kenya, between 1989 and 1991. **METHODS:** As part of an ongoing prospective study on the effect of HIV-1 infection and sexually transmitted diseases, 4883 pregnant women were screened for HIV-1 and syphilis antibodies in one health-centre in Nairobi. **RESULTS:** HIV-1 seroprevalence increased from 6.5 to 13.0% ($P < 0.001$) and syphilis seroreactivity from 2.9 to 5.3% ($P = 0.002$), while there was no change in gonococcal infection rates. The most rapid increase in HIV-1 prevalence was observed in women aged less than 25 years. There was no evidence of demographic fluctuations in the population during this time, or of changes in sexual behaviour, except that fewer women enrolled in 1991 reported having more than one sex partner, compared with women enrolled in 1989 (39.1 versus 20.0%; $P = 0.0001$). HIV-1-seropositive women were more likely to be seroreactive for syphilis than HIV-1-seronegative mothers (7.7 versus 3.2%; odds ratio = 2.5; 95% confidence interval, 1.7-3.8; $P < 0.001$), but there was no difference between the two groups in terms of gonorrhoea prevalence. **CONCLUSION:** These data confirm an association between HIV-1 and syphilis infection, and indicate that both are spreading rapidly among women in Nairobi outside high-risk groups. Increased efforts to control both infections are urgently required. **PIP:** Between January 1989 and December 1991, health workers took blood samples from 4883 pregnant women attending the Nairobi City Commission's Langata Clinic in Nairobi, Kenya to determine demographic factors and indicators of sexual behavior to explain the increase in HIV-1 infection and syphilis among these women of low socioeconomic status. HIV-1 seroprevalence stood at 8.8%. Syphilis seroreactivity was 3.6%. HIV-1 seropositive mothers were 2.5 times more likely to also test positive for syphilis than were HIV-1 seronegative mothers (7.7% vs. 3.2%; $p.001$). There was no significant association between HIV-1 seropositivity and gonococcal infection rate (7.3% vs. 8.9%), however. Women who tested HIV-1 positive tended to be from western Kenya (60.1% vs. 39.1%; $p.0001$). Between 1989 and 1991, annual HIV-1 seroprevalence rates increased from 6.5% to 13% ($p.001$) as did annual syphilis seroreactivity rates (2.9-5.3%; $p=.02$). The HIV-1 seroprevalence rates remained high, but did not rise significantly among syphilis seroreactive women between 1989 and 1991 (17.9-20.7%). They did rise among syphilis seronegative women (6.9-12.5%; $p.0001$), however. The HIV-1 infection rate increase was greater among 25-year old women (5.6-13.2%; $p.001$) than it was among 25-year old women (6.8-12.7%; $p=.09$). Indeed the annual incidence rate for 25-year old women was 3-4%. Between 1989-1991, there was a decrease in the percentage of both HIV-1 seropositive and seronegative women who had had 1 sex partner during the last 2 years (39.1% vs. 20%; $p=.0001$). Demographic factors remained the same throughout the study period. These results verified the link between HIV-1 infection and syphilis and their rapid rise among women in low risk groups. Thus there was a pressing need to improve HIV-1 and sexually transmitted disease prevention programs.