

ABSTRACT

OBJECTIVE:

The objective of this study is to assess whether antiretroviral therapy (ART) may diminish the effectiveness of hormonal contraceptive methods.

METHODS:

Using data from 5153 HIV-infected women followed prospectively for 1-3 years in three HIV prevention studies in Africa, we compared incident pregnancy rates by contraceptive method (implant, injectable, oral or none) and ART use. Multivariable Cox regression models were used to determine adjusted hazard ratios (aHRs) and test interactions between each method and ART use.

RESULTS:

During follow-up, 9% of women ever used implants, 40% used injectables and 14% used oral contraceptives; 31% of women ever used ART, mostly nevirapine (75% of ART users) or efavirenz-based (15%). Among women not using contraception, pregnancy rates were 13.2 and 22.5 per 100 women-years for those on and not on ART, respectively. Implants greatly reduced the incidence of pregnancy among both women on ART [aHR 0.06, 95% confidence interval (95% CI) 0.01-0.45] and not on ART (aHR 0.05, 95% CI 0.02-0.11). Injectables (aHR 0.18 on ART and aHR 0.20 not on ART) and oral contraceptives (aHR 0.37 on ART and aHR 0.36 not on ART) also reduced pregnancy risk, though by lesser degrees. ART use did not significantly diminish contraceptive effectiveness, although all methods showed nonstatistically significant reduced effectiveness when concurrently using efavirenz.

CONCLUSION:

Hormonal contraceptive methods are highly effective in reducing pregnancy risk in HIV-infected women, including those concurrently using ART. Studies of potential interactions between ART and contraceptives should evaluate real-world effectiveness of contraceptive methods; in this study, implants were the most effective method to prevent pregnancy, even during ART use.