

BACKGROUND

- Sexually transmitted Infections (STIs) are common worldwide - chlamydia, gonorrhea, syphilis, and trichomoniasis account for an estimated 376.4 million new STIs
- Among both HIV-uninfected and HIV-infected individual, any STI is a marker of unsafe sexual practices
- STIs may increase viral load replication among HIV-infected persons thus potentially increasing the risk of transmitting HIV
- In HIV-infected individuals, STIs increase genital inflammation that may enhance HIV acquisition
- STIs may be undermining HIV preventative strategies

OBJECTIVES

- Estimate the prevalence of STIs at enrollment and compare the rate of STI acquisition between HIV-infected index cases and their HIV-uninfected partners enrolled in the HPTN 052 clinical trial

METHODS

- The HPTN 052 study enrolled serodiscordant couples and Index cases were randomized to immediate ART upon enrollment + HIV primary care or HIV primary care + delayed ART until CD4+ below or within 200–250 cells/mm³
- STIs were evaluated at enrollment, yearly visits, partner seroconversion, and as clinically indicated
- STIs detected at enrollment were treated adequately soon after
- STI defined as a positive diagnosis for any of the following: Hepatitis B virus, Chlamydia trachomatis, Gonorrhea, Syphilis, and Trichomonas vaginalis
- Log binomial regression and Generalized Estimating Equation models were used to identify factors associated with STIs and compare rate of STI acquisition between HIV-infected index cases and their HIV-uninfected partner, respectively

STIs were *prevalent* among HIV-serodiscordant couples enrolled in HPTN 052 study and *new STI diagnoses were common* in both index cases and partners during the study

RESULTS

- Of the 3526 participants enrolled, 3482 had information on STI test results at baseline
- 363 (10.4%; 95% CI: 9.4–11.4) were diagnosed with at least one STI at enrollment.
- Being female (prevalence ratio (PR) = 1.29; 95% CI: 1.01–1.66) or unmarried (PR = 1.61; 95% CI: 1.03–2.51) was associated with prevalent STIs
- The rate of STI acquisition among female index cases was 2.5 times (95% CI: 1.74–3.60) the rate among male partners.

Table: Comparison of STI incidence between HIV-infected index cases and HIV-uninfected partners

| | Gender | No. of new Infections | Follow-up time | Incidence Rate /100 person years | Unadjusted IRR (95% CI) | Adjusted IRR [†] (95% CI) |
|---------|--------|-----------------------|----------------|----------------------------------|-------------------------|------------------------------------|
| Partner | Male | 89 | 3977.07 | 2.24 | 1.0 | 1.0 |
| | Female | 121 | 4189.72 | 2.88 | 1.26 (0.91–1.76) | 0.82 (0.51–1.31) |
| Index | Male | 58 | 4831.17 | 1.20 | 0.52 (0.35–0.77) | 0.66 (0.40–1.07) |
| | Female | 293 | 4700.98 | 6.23 | 2.70 (2.08–3.50) | 2.50 (1.74–3.60) |

[†] Adjusted for age, education, marital status and condom use

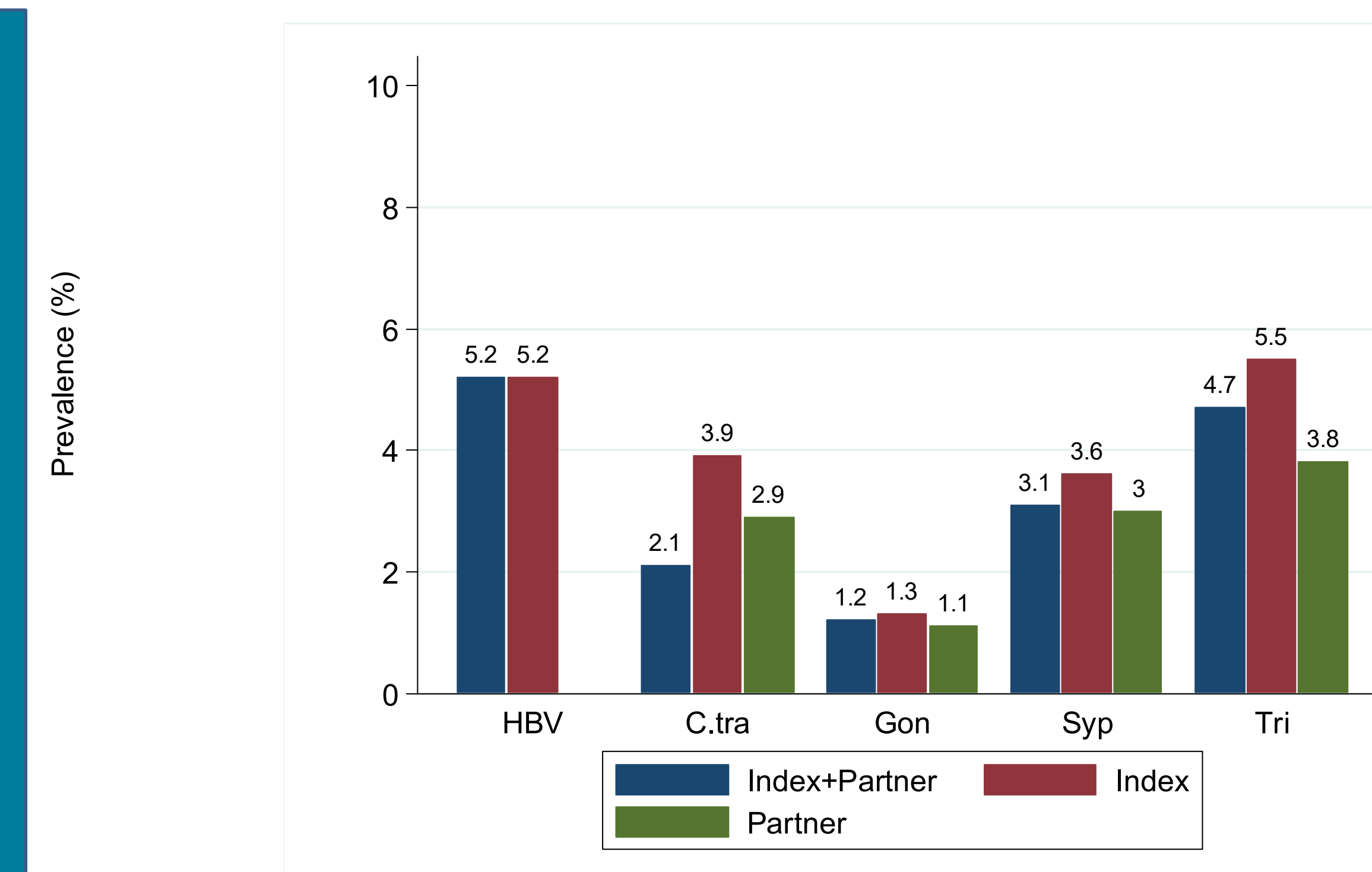


Fig. Prevalence of each STI at enrollment. HBV: Hepatitis B virus; C.tra: C. trachomatis; Gon: Gonorrhea; Syp: Syphilis; Tri: Trichomonas vaginalis

CONCLUSIONS

- STI prevalence at enrollment was slightly higher among HIV-infected index cases compared to their HIV-uninfected partners
- STI prevalence at enrollment was higher among females and unmarried participants
- HIV-infected female index participants were more likely to acquire STIs compared to HIV-uninfected male partners
- Incident STIs were relatively common in HIV discordant couples in a clinical trial setting highlighting the importance of continued STI counseling and need for condom use even to prevent adverse sequela from bacterial STIs

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