

Sexually Transmitted Infections Among HIV Serodiscordant Sexual Partners: HPTN 052

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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 HIVinfected 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

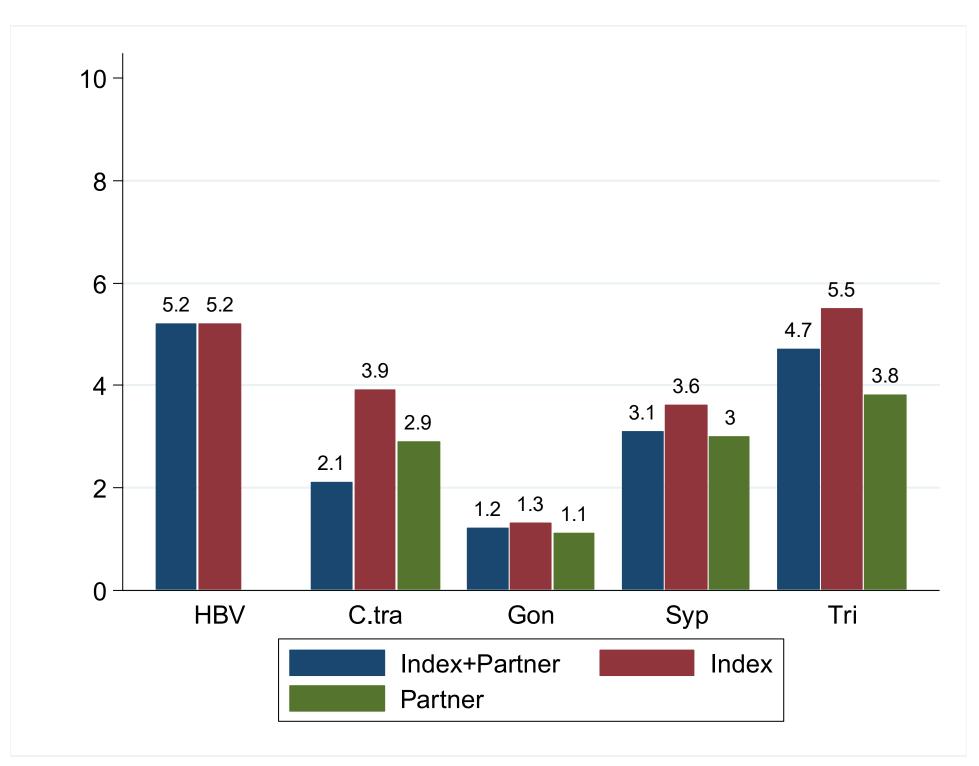


Fig. Prevalence of each STI at enrollment. HBV: Hepatitis B virus; C.tra: C. trachomatis; Gon: Gonorrhea; Syp: Syphilis;

CONCLUSIONS

Tri: Trichomonas vaginalis

- STI prevalence at enrollment was slightly higher among HIV-infected index cases compared to their HIVuninfected 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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