Relevance of Asymptomatic STIs in a High-Risk Population of MSM Undergoing Periodic Screening

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Rosario Palacios, **Cristina Gómez-Ayerbe,** María López-Jódar, Isabel Pérez-Hernández, Isabel Viciana, Marina Villalobos, Victoria García, Jesús Santos
Hospital Virgen de la Victoria, IBIMA Plataforma-BIONAND Málaga (Spain)

BACKGROUND

- One of the limitations in the control of STIs is that many of them are asymptomatic, making diagnosis, treatment, and contact tracing challenging.
- The **objective** of this study is to analyze the significance of asymptomatic STIs within a high-risk population (MSM) that undergoe regular screening for these infections.

METHODS

- **Single-center study**
- **Population**
  - Our cohort of MSM on PrEP (Pre-Exposure Prophylaxis)
  - People Living with HIV (PLHIV) followed up in our Clinic
  - both at risk of STIs
- **STI screening**
  - every 3-6 months
  - serological tests, cultures, and nucleic acid amplification tests in pharyngeal, rectal, and urethral/urine samples
- **Analyzed STIs**
  - *Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT), Lymphogranuloma venereum (LGV), and syphilis.
- **Study period**: November 1, 2022, to June 30, 2023.
- **Statistical analysis** was performed using SPSS 24.0 software. Proportions were compared using the chi-squared test or Fisher's exact test.

RESULTS

During this period, STI screening was conducted on **788 individuals on PrEP** and **456 PLHIV**, (all **MSM)**. A total of **560 STIs** were diagnosed (359 in PrEP and 201 in PLHIV; p=0.755): NG 194 (34.6%), syphilis 130 (23.2%), CT 121 (21.6%), and LGV 79 (14.1%), and other 36. Among these,; **416 (74.2%) were asymptomatic.** Table 1 provides details of symptomatic and asymptomatic STIs in both groups. Some subjects had NG and/or CT in multiple sites. Coincident STIs were detected in 20.3% of the cases. There were no seroconversions among individuals on PrEP.

CONCLUSIONS

- Asymptomatic STIs are highly prevalent in this high-risk MSM population.
- No differences in clinical presentation were observed between individuals on PrEP and PLHIV for any of the studied STIs.
- New prevention strategies are needed to control STIs in these high-risk populations.

***Asymptomatic STIs** are **highly prevalent** in a high-risk MSM population. Which is the best strategy to control them?*

RESULTS

- N = 1.244 MSM
  - 788 on PrEP
  - 456 PLVIH
- STIs: 560
  - 359 en PrEP p=0.755
  - 201 PVVIH

N. gonorrhoeae	194 (34.6%)
Syphilis	130 (23.2%)
C. trachomatis	121 (21.6%)
LGV	79 (14.1%)
Other STIs	36 (6.4%)

- Coincident STIs: 20.3% of cases
- No seroconversions among subjects on PrEP

Asymptomatic STIs 416 (74.2%)

		PrEP (N = 788)		PLHIV (N = 456)		p
	N	Symptomatic	Asymptomatic	Symptomatic	Asymptomatic	
Pharyngeal NG	**89**	0	64/64 (100)	0 (0)	25/25 (100)	-
No-pharyngeal NG	**131**	20/101 (19,8)	81/101 (80,1%)	8/30 (26,6)	22/30 (73,3)	0.625
Pharyngeal CT	**19**	2/15 (13,3)	13/15 (86,6)	0/4 (0,0)	4/4 (100)	0.520
No-pharyngeal CT	**104**	13/84 (15.4)	71/84 (84.5)	5/20 (25)	15/20 (75)	0.526
LGV	**79**	16/37 (43.2)	21/37 (56.7)	17/42 (40.4)	25/42 (59.5)	0.873
Syphilis	**130**	17/56 (30,3)	39/56 (69,6)	19/74 (25,6)	55/74 (74.3)	0.657

Table 1: STIs in individuals on PrEP and PLHIV: n (%)

DISCUSSION

- Asymptomatic STIs are highly prevalent in this high-risk MSM population.
- As most STIs can be accurately diagnosed and treated during asymptomatic carriage, it is assumed that widespread screening for them is an effective way to reduce their prevalence and associated harms. There is no doubt about screening for HIV and syphilis, but it is not so evident for other STIs such as NG and CT; there is controversy that the harms of screening these STIs may outweigh any benefits. The harms are mainly related to the increased antimicrobial consumption, which can lead to a more frequent screening and increased detection of asymptomatic STIs, to an increased risk of antimicrobial resistance in target and non-target organisms, and to a deleterious effect on the microbiome. In addition, psycho-social harms may be associated also with the diagnosis of asymptomatic STIs.
- International guidelines stipulate that screening programs should only be introduced once high-quality randomized clinical trials have established that the benefits of screening outweigh the harms, which is not available for NG or CT in populations with a high STIs prevalence.

- **In this stage, our questions are:**
  - ***Are we doing the best to resolve the problem of STIs?***
  - ***Are new prevention strategies needed to control STIs in these high-risk populations?***

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Author contact: rosariopalaci@gmail.com