Sistema Socio Sanitario
Regione Lombardia
ASST Fatebenefratelli Sacco

1046

Evaluation of DoxyPEP Consumption in a PrEP Cohort After Structured Counseling

Samuel Lazzarin[1], Francesco Caruso[1], Chiara Fusetti[1], Maria Vittoria Cossu[1], Federico Fassio[1], Valentina Iannone[1], Irene Vaglio[1], Francesco Petri[1], Cristina Gervasoni[1], Andrea Giacomelli[1], Andrea Gori[1], Davide Moschese[1]
[1]Department of Infectious Diseases, ASST Fatebenefratelli Sacco University Hospital, Milan, Italy

BACKGROUND

Doxycycline post-exposure prophylaxis (doxyPEP) is an effective strategy to prevent bacterial sexually transmitted infections (bSTIs), with greatest efficacy against chlamydia and syphilis [1]. However, concerns that high antibiotic consumption may drive the emergence of antimicrobial resistance have limited its widespread implementation in clinical practice [2,3].
The aim of our study was to evaluate doxyPEP use and actual doxycycline consumption in a cohort of HIV pre-exposure prophylaxis (PrEP) users after structured counseling.

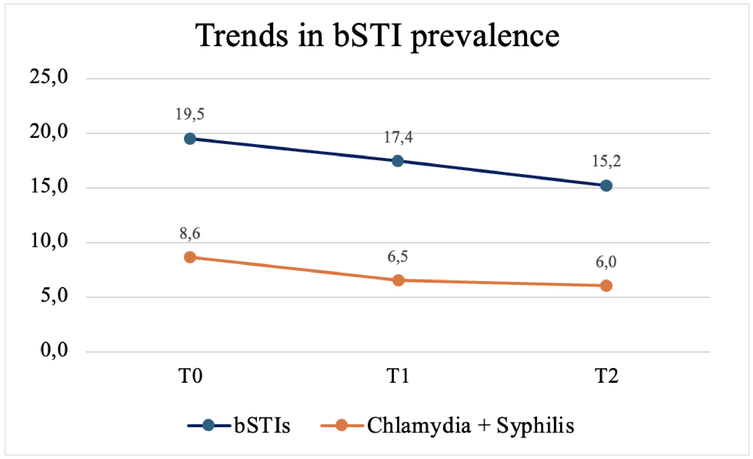
METHODS

We conducted a retrospective analysis of all patients attending our PrEP clinic from June 2024 to September 2025 who received structured doxyPEP counseling and prescription, which was advised for individuals reporting at least 5 sexual partners in 72 hours, as per local guidelines [4].
At each quarterly visit, patients were tested for syphilis, chlamydia, and gonorrhea; number of partners, doxyPEP use, and number of doses (1 dose = 2 pills) per interval between visits were recorded. Analysis was limited to the first two follow-up visits.
Trends in doxyPEP use and correlation with number of partners were analyzed using non-parametric tests ($p < 0.05$). Associations between doxyPEP use and bSTI prevalence were assessed using generalized estimating equations.

Targeted behavioural counseling supports doxyPEP implementation while tempering antibiotic consumption

RESULTS

A total of 338 men who have sex with men were included, with a median age of 35 (IQR 30–41) and a median follow-up of 6.5 months (IQR 6.0-7.3). DoxyPEP users were 31.7% and 30.7% at the first and second follow-up visits, respectively ($p = 0.43$). Among users, the median number of doses per interval was 2 (IQR 1–2) at the first visit and 2 (IQR 1–4) at the second, corresponding to 0.67 doses per person-month. Only 8 (2.4%) participants reported more than 5 doses.
DoxyPEP use was associated with a higher number of partners ($p < 0.001$). Prevalence of all bSTIs and of chlamydia and syphilis only was 19.5% and 8.6% at baseline, and 15.2% and 6.0% at the second follow-up visit, respectively, showing a non-significant decrease without significant association with doxyPEP use.



CONCLUSIONS

In this real-world PrEP cohort, overall antibiotic consumption for doxyPEP was low, suggesting that targeted behavioral counseling may help prevent overuse and mitigate concerns about antimicrobial resistance. These findings highlight the importance of counseling in supporting antimicrobial stewardship while maximizing doxyPEP benefits.

REFERENCES

1. Molina JM et al. Doxycycline prophylaxis and meningococcal group B vaccine to prevent bacterial sexually transmitted infections in France (ANRS 174 DOXYVAC): a multicentre, open-label, randomised trial with a 2 × 2 factorial design.
2. Bercot B et al. Antimicrobial drug-resistant Neisseria gonorrhoeae (GC) infections in men using doxycycline postexposure prophylaxis. A substudy of the ANRS 174 DOXYVAC trial.
3. Rossotti R et al. Attitudes and prescribing practices on doxycycline postexposure prophylaxis (DoxyPEP) among Italian infectious diseases physicians: findings from a National SIMIT Survey.
4. Nozza S et al. Management of asymptomatic bacterial STIs and doxycycline postexposure prophylaxis: consensus statement of the Italian Society of Infectious and Tropical Diseases.

AUTHOR CONTACT INFORMATION

Institutional mail address: *lazzarin.samuel@asst-fbf-sacco.it*

PLAIN LANGUAGE SUMMARY

Providing behavioral guidance allows people to use doxyPEP to prevent bacterial STIs while limiting unnecessary antibiotic use.