



PrEP in Eastern Piedmont: STIs and renal safety

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Introduction

- Daily or On Demand Oral Pre-Exposure Prophylaxis (PrEP) with TDF/FTC for HIV infection has been available in Italy since 2017 (1,2).
- We observed a cohort of people using PrEP, followed up at the outpatient clinic for Infectious Diseases of University Hospital "Maggiore della Carità" in Novara, a secondary level hospital based in south-eastern Piedmont.

Methods

- Descriptive analysis of our study population
- Timelapse: December 2018 to March 2023.
- Items analyzed:
 - sexual behavioral risks factors
 - Gender
 - Age
 - Comorbidities
 - PrEP regimen (Daily vs On Demand)
- Clinical assessment **before** PrEP start and **every 3 months** thereafter:
 - HIV status
 - STIs
 - renal function
 - change in PrEP regimen or sexual behavior.

Results

- Study population: Thirty men and one woman (demographic characteristics in Table 1).
- None of them was a sex worker
- One subject received Post-Exposure Prophylaxis (PEP) twice before starting PrEP

Demographic characteristics

Age	36
Sex (M,F)	30 M, 1 F
Nationality	29 Italian 2 South America
Comorbidities	1 renal nephrolithiasis 1 deep vein thrombosis 1 ipophosphoremia 1 diabetes and hypertension with obesity
Sexual Orientation	28 cis-gender homosexual men 1 cis-gender bisexual man 1 cis-gender eterosexual man 1 cis-gender eterosexual woman

- At baseline, 17 daily regimen while 14 preferred on-demand
- During follow-up three subjects switched from daily to on-demand regimen due to changes in sexual behavior
- All PrEP users received vaccinations for monkeypox, HPV, hepatitis, N. meningitidis and S. pneumoniae
- All subjects were followed-up for a median of 5 months

Results: renal toxicity

- 50% of them presented low phosphate level at baseline (one patient below 1,5 mg/dL) and underwent nephrologic consultation.
- None of them showed an increase in creatinine level
- 4 individuals (13%) showed a slight decrease in phosphate level, with no evidence of nephropathy
- Rapid improvement with dietary supplementation
- None of them interrupted PrEP for renal toxicity issues

Results: STIs

- Previous PrEP start 18 individuals reported at least 1 STI (6 syphilis, 4 gonorrhoeae, 9 chlamydial or mycoplasma urethritis/proctitis, one acute HBV infection and one HCV infection)
- At baseline two subjects showed positive pharyngeal swab for Neisseria meningitidis, without neurological symptoms and received quinolone prophylaxis
- During observation period, 6 subjects contracted a STI: three symptomatic syphilis and three asymptomatic urethritis
- Median time from PrEP start to STI event: 5,5 months
- None of them seroreverted HIV
- Only one individual interrupted PrEP use according to a change in risk behavior (from open to closed sexual relationship)

Conclusions

Our small cohort confirm that PrEP is a safe and valuable preventive measure for HIV infection and ensures STIs screening and treatment for high risk population.

References

1. Okwundu CI, Antiretroviral pre-exposure prophylaxis (PrEP) for preventing HIV in high-risk individuals. Cochrane Database Syst Rev. 2012;7:CD007189.
2. Molina JM, Efficacy, safety, and effect on sexual behaviour of on-demand pre-exposure prophylaxis for HIV in men who have sex with men: an observational cohort study. Lancet HIV. 2017 Sep;4(9):e402-e410.