

Sexual assault is associated to loss to follow-up for non-occupational Post-Exposure Prophylaxis for HIV

G. Bozzi¹, A. Liparoti^{1,2}, A. Pastena^{1,2}, G. Ancona¹, C. Bobbio², N. Iannotti¹, B. Mariani¹, A. Muscatello¹, A. Bandera^{1,2}

1. Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milano, Infectious Diseases, Milano, Italy. 2. Unimi - Università degli Studi di Milano, Milano, Italy

Introduction

- Post-exposure prophylaxis (PEP) is an important measure to reduce the risk of HIV transmission, but it is effective if properly completed.
- Literature reports optimal adherence rates around 57% for non-occupational PEP in Europe.
- We aimed at assessing adherence to follow-up for PEP and identifying sub-populations at risk.

Study Design

- Subanalysis of the monocentric observational cohort study APE, aimed at assessing PEP adherence.

Methods

- Study population is people who received an ID consultation for PEP from February 1, 2023 to January 31, 2024 at IRCCS Policlinico, Milan, a tertiary center which includes a STI center, a general ER and an ob-gyn ER.
- Demographic, epidemiologic and serologic data at ID consultation were collected and analyzed. Patients not undergoing HIV testing at day-28 and not showing up at end-of-PEP visit were categorized as lost to follow-up.
- Frequencies for categorical variables and medians with [inter-quartile range, IQR] for continuous variables were used; Chi-squared, Fisher's exact and Mann-Whitney tests were used for categorical and continuous variables, respectively.

Results/1

COHORT CHARACTERISTICS

- A total of 270 patients received ID evaluation for PEP, 37 reporting occupational exposure (OE) and 233 reporting non-occupational exposure (NE). Evaluations were within 48 hours from exposure in 35/37 OE and 203/233 NE.
- OE median age was 32 years [IQR 26-42], 26/37 were female. NE median age was 26 years [IQR 22-33], 102/233 were female; 60/233 were extra-EU citizens.
- Overall, PEP was started in 238/270 cases (88.1%) according to guidelines and specialist's opinion, 91% OE and 70.3% NE.

Results/2

HEPATITIS B ANTIBODY TITER

- While 70% of OE patients had a protective hepatitis B antibody titer (anti-HBs ≥ 10 mIU/mL), 57.5% of NE patients did not show protective titers at baseline, despite reporting vaccination. A vaccine booster was offered to unprotected patients as per guidelines.

Results/3

NON OCCUPATIONAL EXPOSURE AND FOLLOW-UP

- Of non-occupational cases, 88 (43.8%) reported sexual assault and received additional antimicrobial prophylaxis and emergency contraception where indicated at ob-gyn ER.

- Of 212 individuals with NE who started PEP, 201 had available follow up data. Of them, 152/201 (75.6%) were adherent to follow up; all tested negative for HIV, HCV and T. pallidum-Ab at day-28.
- Conversely, 49/201 (24.4%) were lost to follow-up and 35/49 (71.4%) of these patients reported sexual assault, as opposed to 53/152 (34.9%) adherent patients ($p < 0.0001$). Age, country of origin, time from exposure did not show association to loss to follow-up.

Figure 1 Setting of evaluation for non-occupational exposure adherent patients

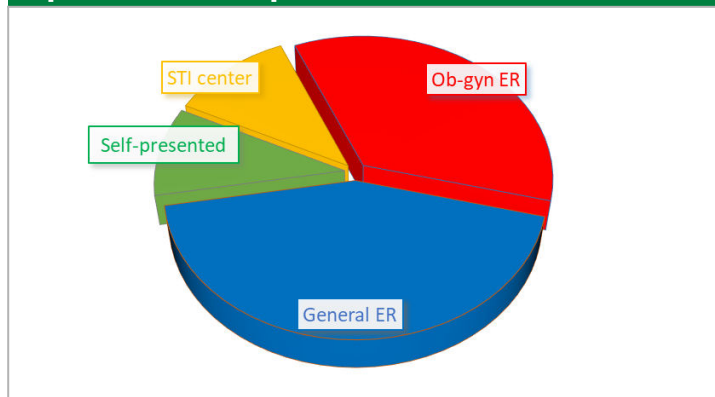


Figure 2 Setting of evaluation for non-occupational exposure cases lost to follow up

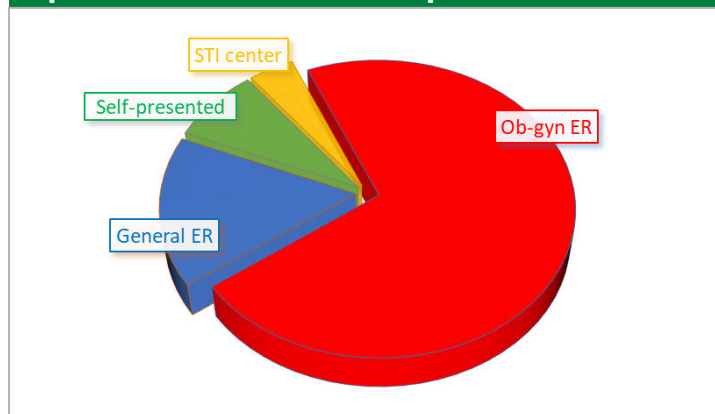


Table 1 ID evaluation for PEP from February 1, 2023 to January 31, 2024 at IRCCS Policlinico, Milan

	Total N=270	Occupational Exp. N=37	Non-occupational Exp. N=233
Age	27.0 (22.0-34.0)	32.0 (26.0-42.0)	26.0 (22.0-33.0)
Gender			
• Female	128 (47.4)	26 (70.3)	102 (43.8)
• Male	142 (52.6)	11 (29.7)	131 (56.2)
Country of origin			
• Italy-Europe	203 (75.2)	30 (81.1)	173 (74.3)
• Extra-Europe	67 (24.8)	7 (18.9)	60 (25.7)
Time of evaluation			
• ≤ 48 h	238 (88.1)	35 (94.6)	203 (87.1)
• > 48 h	32 (11.9)	2 (5.4)	30 (12.9)
Start PEP			
• No	32 (11.9)	11 (29.7)	21 (9.0)
• Yes	238 (88.1)	26 (70.3)	212 (91.0)

Conclusion

- More than half of people evaluated for non-occupational risk exposure for HIV had non-protective antibody titers for HBV, highlighting a possible public health issue among the newer generations living in Italy.
- Individuals reporting non-occupational exposure completed PEP and follow up in 75.6% cases. A cohort expansion is underway to highlight the precision of this measure.
- Sexual assault was associated to loss-to-follow up, likely due to multiple reasons including trauma, social determinants and pill burden tolerance; this highlights an unmet need for targeted interventions.

References

- Linee Guida Italiane sull'utilizzo della Terapia Antiretrovirale e la gestione diagnostico-clinica delle persone con infezione da HIV-1 Edizione 2017
- EACS European AIDS Clinical Society GUIDELINES Version 10.0 November 2019
- Mayer KH et al. Optimal HIV postexposure prophylaxis regimen completion with single tablet daily Elvitegravir/Cobicistat/Tenofovir Disoproxil Fumarate/Emtricitabine compared with more frequent dosing regimens. J Acquir Immune Defic Syndr. 2017; 75(5): 535-539.