2024
19-21 GIUGNO ROMA
UNIVERSITA' CATTOLICA DEL SACRO CUORE CENTRO CONGRESSI EUROPA
RESEARCH and CARE: FROM BENCH, TO BEDSIDE, TO COMMUNITY
Promosso da SIMIT
16° CONGRESSO NAZIONALE
ICAR
Italian Conference on AIDS and Antiviral Research
P 71
POSTER 4 YOU
ICAR 2024

Short-term mortality in people with HIV infection over the past two decades.

M. Melchio, M. Bavastro, L. Taramasso, C. Marelli, M. Bassetti, A. Di Biagio

Introduction

- In recent years, progress in antiretroviral therapy has led to a significant improvement in life expectancy and quality of life of people living with HIV (PWH).
- At the same time, recent studies have shown that the incidence of HIV diagnoses is not decreasing.

Study Design

- The aims of the study are to describe the cohort PWH diagnosed with HIV in the last 20 years at a large Italian Hospital, assess risk factors for short-term mortality, and determine whether there has been a change over time in the epidemiology of HIV.

Methods

- Data were collected from the Regional "HIV survey" registry. All PWH with a new diagnosis between January 2004 and December 2023 were included.
- For each PWH, demographic characteristics, risk factors for HIV and immunovirological status at the time of diagnosis were collected.
- Mortality or any loss to follow-up within the first 12 months was assessed. Short-term mortality was defined as death from any cause within 1 year of HIV/AIDS diagnosis. Deaths reported by the end of March 2024 were included in the analysis.
- Risk factors independently associated with mortality and loss to follow-up were assessed using logistic regression and presented using odds ratio (OR) and confidence interval (C.I.); to assess the trend of epidemiological variables, a comparison between the decade 2014-2023 vs. 2004-2013 was conducted.

Results

Over the course of the 20 years of the study, 696 new diagnoses of HIV were performed, with a median of 34 diagnoses per year (range 25-46).
The median age was 40 years (IQR 31-50), 72.7% were male, 66.9% were Italian, 53.2% were heterosexual, and 58.8% were late presenters (CD4+ lymphocytes count at diagnosis <350 cells/mmc).
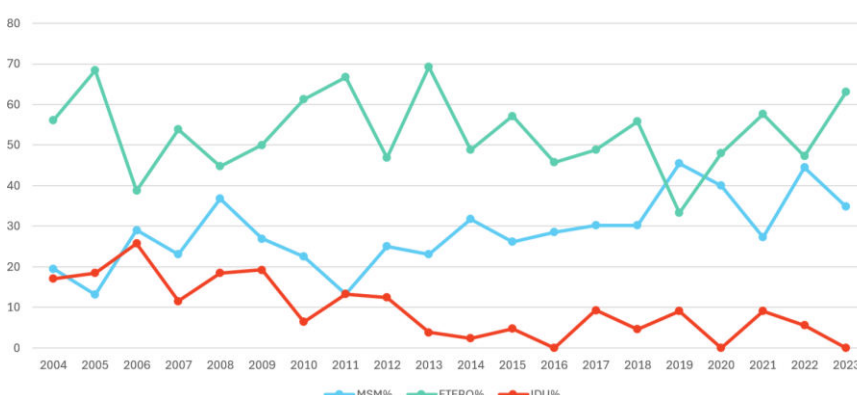

Figure 1 – Trend of risk factors

When comparing the decades 2004-2013 vs. 2014-2023 diagnoses decreased among intravenous drug users and increased among men who have sex with men (although this may be explained by more accurate collection of medical history).

Results of 2

Mortality

Overall, **26 PWH died during the first year after diagnosis, with a short-term mortality rate of 3.7%,** with death occurring with a median of 41 days (IQR 28-136) after diagnosis. The main factor associated with increased mortality was having CD4 count <200 cells/mmc at diagnosis (table 1).

Seventy-five PWH (10.8%) were **lost to follow-up** in the first year after diagnosis, with male sex and non-Italian nationality being the main risk factors (OR 3.02, 95% C.I. 1.6-5.8 and OR 1.96, 95% C.I. 1.1-3.4, respectively).

Death during the first year	OR	P value	95% CI	
Age	1.038	**0.039**	1.002	1.076
Male sex	1.226	0.743	0.364	4.128
CD4 <200 cells/mmc	14.963	**0.000**	3.418	65.498
MSM	0.677	0.482	0.229	2.006
Non-italian nationality	0.498	0.245	0.154	1.611

Table 1 – Risk factors for short-term mortality

The main factor associated with increased mortality were older age and a CD4 cell count <200 cells/mmc at diagnosis.

Results of 3

Trends

When comparing the decades 2004-2013 vs. 2014-2023**, an increase in HIV diagnoses was observed** (319 vs. 377). The percentage of males and late presenters remained stable over the years, as did the mortality rate (Fig. 2). Conversely, diagnoses decreased among intravenous drug users and increased among men who have sex with men (although this may be explained by more accurate collection of medical history; Fig. 1), among people older than 45 years, compared to younger individuals, and among people from geographic areas outside Italy (all p <0.01).
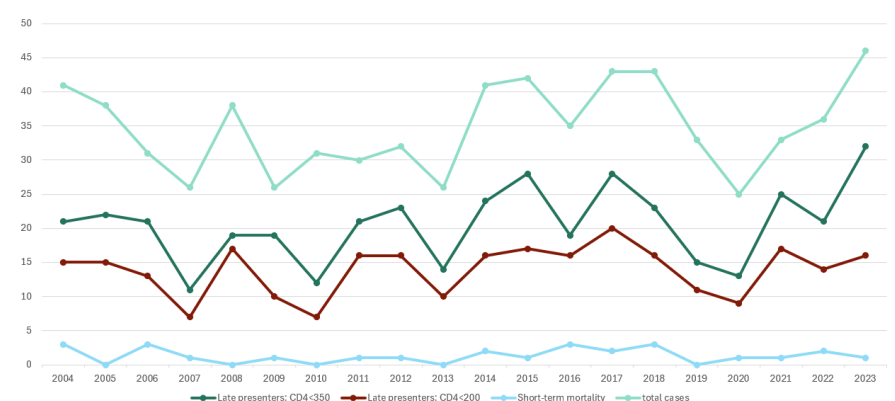

Figure 2 – Trend of total diagnoses of HIV, late presenters, ad short-term mortality

When comparing the decades 2004-2013 vs. 2014-2023, an increase in HIV diagnoses was observed (319 vs. 377). The percentage late presenters remained stable over the years, as did the short-term mortality rate

Conclusion

- In order to drastically reduce the number of HIV infection cases and short-term mortality, it is mandatory to promote screening and remove barriers to HIV testing.