



POSTER PRESENTATION

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# HIV-related morbidity rate, thirteen years after the introduction of highly active antiretroviral therapy (1996-2009)

Roberto Manfredi

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## Background

After the availability of combined antiretroviral therapy (cART), we quantified the consequences on the general morbidity rates, and HIV-related hospitalization rates, in the period 1992-2008.

## Methods

HIV-associated hospitalizations were assessed according to three different periods of time: before cART introduction (1992-1995), immediately after first cART availability (1996-1998), and the last one, referred to the fully established cART era (1999-2008).

## Results

During the three examined periods, an undetectable viremia was never detected in any patient in the pre-cART era, in 21% of cases in the first years of cART, and in 41% of patients in the last years of cART ( $p < .0001$ ). In parallel, the mean CD4<sup>+</sup> T-lymphocyte count in the three study groups tested  $27.2 \pm 11.3$  cells/ $\mu$ L,  $39.3 \pm 14.6$  cells/ $\mu$ L, and  $89.6 \pm 38.2$  cells/ $\mu$ L, respectively ( $p < .001$ ). During time, an increased frequency of hospitalization of heterosexual and female patients occurred, while the frequent of IVDA had a significant drop (from 69% in the pre-cART period, to 57% during initial cART era, to 39% at the time of consolidated cART era;  $p < .0001$ ). The patients with a prior diagnosis of full-blown AIDS represented 86%, 57%, and 33%, respectively ( $p < .0001$ ), while hospitalized inpatients who experienced a diagnosis of AIDS concurrently with the first detection of HIV infection (the so-called "AIDS presenters"), showed an evident temporal increase (11%, 21%, and 39%, respectively;

$p < .0001$ ). Among concurrent illnesses, a huge rise of chronic liver diseases was registered from the pre-cART time (18%), to the first years of cART availability (29%), to the current time of advanced cART (48%) ( $p < .001$ ), while an increased mortality due to hematological and solid malignancies also occurred, although at a lesser extent (8.2%, 11.7%, and 17.8% respectively;  $p < .001$ ).

## Discussion

The introduction of cART profoundly acted on the general morbidity for HIV infection and AIDS, although the epidemiological-clinical-laboratory scenario significantly changed over time. These modifications need a careful monitoring, in order to ensure a timely diagnostic and clinical disease recognition by all involved health caregivers who face HIV-infected patients, and to plan an adequate allocation of available resources, funding, structures, and dedicated personnel.

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Correspondence: Roberto.manfredi@unibo.it  
Infectious Diseases, University of Bologna, S. Orsola Hospital, Bologna, Italy