

POSTER PRESENTATION

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Immunological response among patients with undetectable viral load followed for 5 years

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Purpose of the study

to assess the immunological response at 5 years in HIV-1 infected patients under ART and with persistently undetectable plasma viral load.

Methods

of 1450 patients currently on ART, 504 HIV-1 infected patients with persistently undetectable viral load for 5 or more years (mean = 8±2 years) were selected. Results of plasma viral load (performed by PCR RNA-HIV, AmpliCor 1.5[®]) and CD4 count of all patients obtained every 3 or 6 months were abstracted. The distribution of 5-year CD4 count was described using medians and compared between classes of clinical and demographic variables using Wilcoxon's or Kruskal-Wallis' test. Variation in CD4 count over 5 years was described using means and compared between classes using Student's t test or ANOVA. In order to quantify the associations between independent variables and CD4 count variation, linear regression coefficients and respective 95% confidence intervals (95% CI) were calculated, and adjusted for sex, naïve status, transmission mode, baseline viral load and age at viral load suppression.

Summary of results

In crude analysis, 5-year CD4 count (per mm³) was significantly higher in women (medians: 656 vs. 573, $p=0.006$), in younger patients (<30 years-old: 656 vs. 526 in those over 49), in non-AIDS patients (637 vs. 513.5 in AIDS patients, $p<0.001$) and in those with the highest baseline CD4 count (>350: 826 vs. 459 in those under 100; $p<0.001$). Mean CD4 variation was greater in women (467.5 vs. 401.3, $p=0.022$), in naïve patients

(437.9 vs. 361.8, $p=0.006$), in those with the highest baseline viral load (>750000 copies: 490.3 vs. 271.0 in those under 10000 copies) and correspondingly in patients with the lowest baseline CD4 count (<100: 469.7 vs. 359.5 in those over 350). Patients on NNRTI had larger improvement than those on PI (436.2 vs. 403.0) but no significant differences in CD4 count were found after 5 years. In multivariate analysis, mean CD4 count improvement remained significantly higher in women and lower in older patients. Improvement was also directly associated with baseline viral load.

Conclusions

Even though patients with the lowest CD4 count at baseline had greater immunological improvement over 5 years, average CD4 count remained lower than in those whose baseline count was higher. Importantly, the gap in immunological response (regarding final CD4 count and mean improvement) widened over the follow-up period between women and men and between younger and older patients.

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