Performance of WHO immunological response to predict virological failure in patients with severe versus moderate immunosuppression at antiretroviral therapy initiation

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OBJECTIVES

To evaluate the sensitivity and Positive Predictive Value (PPV) of WHO-immunological criteria (CI) to predict virological failure (EV) among patients with severe (who have high incidence of opportunistic infections) versus moderate immunosuppression at antiretroviral therapy (ART) initiation.

METHODS

HIV-positive patients naive to ART who started the treatment with combination of 2NRTIs plus 1INNTI since January 2004 and have twelve months follow-up until December 31, 2012. Were divided into two groups: G1=severe (CD4 < 200) and G2=moderate (CD4 ≥200-350) immunosuppression. CI was defined as: CD4 cell count < 100 cell/mL after 12 month, >50% drop from CD4 count peak and CD4 cell count lower than baseline. Sensitivity of CI to predict EV was analyzed across level of viral load(VL)≥1000 copies/ml.

RESULTS

We included 328 patients in G1 and 214 in G2. At baseline, 33.23 versus 35.05, p=0.71 were male, the median values were: Age: 39.88years (IQR (Inter–quartile Range):33.09 – 46.46) versus 39.66years (IQR: 34.38 – 46.90), p=0.44; CD4: 103cells/mm³ (IQR: 52 – 162) versus 263cells/mm³ (IQR: 229 – 303) (p<0.01), prior AIDS illness: 72.87% versus 64.49% (p=0.045). Over the nine-year study period, in 12-month follow-up incidence rate of opportunistic infections was 2.98 versus 1.22 per 100 person-years(< 0.001) and 20.73% versus 23.83%(p=0.4), 14.94% versus 23.36%(p=0.017) patients respectively had virological and immunological failure, performance of CI was: sensitivity: 38.8%(25.2 – 53.8) versus 48%(33.7 – 62.6), PPV : 27.9%(17.7 – 40.1) versus 47.1%(32.9 – 61.5), respectively in G1 and G2.

CONCLUSIONS

Severe immunosuppression at initiation of ART is not associated with the low sensitivity of WHO-immunological criteria.

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REFERENCES:


