CD4:CD8 ratio comparison between cohorts of HIV-positive Asians and Caucasians upon commencement of antiretroviral therapy.

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Abstract

BACKGROUND: In the era of effective antiretroviral treatment (ART) CD4:CD8 ratio is proposed as a potential marker for HIV-positive (HIV+) patients at increased risk for non-AIDS comorbidities. The current study aims to compare CD4:CD8 ratio between Asian and Caucasian HIV+ patients.

METHODS: HIV+ patients from the Australian HIV Observational Database (AHOD) and the TREAT Asia HIV Observational Database (TAHOD) meeting specific criteria were included. In these analyses Asian and Caucasian status were defined by cohort. Factors associated with a low CD4:CD8 ratio (cut-off <0.2) prior to ART commencement, and with achieving a normal CD4:CD8 ratio (>1) at 12 and 24 months post ART commencement were assessed using logistic regression.

RESULTS: There were 591 patients from AHOD and 2620 patients from TAHOD who met the inclusion criteria. TAHOD patients had a significantly (p<0.001) lower odds of having a baseline (prior to ART initiation) CD4:CD8 ratio greater than 0.2. After 12 months of ART, AHOD patients were more than twice as likely to achieve a normal CD4:CD8 ratio compared to TAHOD patients (15% vs 6%). However, after adjustment for confounding factors there was no significant difference between cohorts in the odds of achieving a CD4:CD8 ratio > 1 (p=0.475).

CONCLUSIONS: We found a significantly lower CD4:CD8 ratio prior to commencing ART in TAHOD compared to AHOD even after adjusting for confounders. However, after adjustment, there was no significant difference between the cohorts in odds of achieving normal ratio.
Baseline CD4+ and CD8+ counts seem to be the main driver for this difference between these two populations.

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