Impact of Mucosal Immunity and HIV Persistence on CD4/CD8 ratio after ART initiation

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METHODS

**Baseline** and duodenal and rectal biopsies were obtained from 11 HIV− controls and 35 ART naïve HIV+ subjects participating in a randomized clinical trial comparing different ART initiation strategies, at baseline and after 9 months of treatment.

**Design** was a single-center study for immunofluorescence analysis and flow-cytometry measurements.

**Statistical analysis:** Longitudinal changes between CD4/CD8 ratio changes and variations of markers of viral persistence in blood and gut were analyzed using linear mixed models with random intercepts, considering the CD4/CD8 ratio as fixed effect. Continuous variables were log-transformed when necessary to satisfy model assumptions.

**RESULTS**

- *The CD4/CD8 ratio significantly improved in all compartments (A; blood; B: duodenum; C: rectum), but the extent of the recovery was smaller in duodenum.*

- *No differences in the extent of CD4/CD8 ratio recovery was observed between the regimens (p<0.001).*

**CONCLUSIONS**

- *CD4/CD8 recovery during ART correlates with improvements in markers of viral persistence, T cell activation and T cell maturation in PB and colon.*

- *The duodenum may represent a unique compartment for impairment of CD4 maturation and depletion.*

- *A quadruple ART regimen did not add detectable benefit for triple ART.*

**Bibliography**


