HIV Reservoir Changes in Resting CD4 Subsets in the IL7 plus ART Intensification EraMune01 Study

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ABSTRACT: # 977

Unspliced HIV DNA/10^6 subset cells

In vitro, IL7 induced a massive CD4 T cell production in all subsets despite in vivo ART.

RESULTS

Table 3: Relative subset Contribution to the HIV reservoir

<table>
<thead>
<tr>
<th>Subset</th>
<th>Relative Contribution to the HIV reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>0.04</td>
</tr>
<tr>
<td>CM</td>
<td>0.35</td>
</tr>
<tr>
<td>TM</td>
<td>0.31</td>
</tr>
</tbody>
</table>

CONCLUSIONS

HIV reservoir studies in the distinct major subsets of resting CD4+ T-cells from chronically HIV-infected patients:

- After a year long intensification with RAL+MAR

- The EraMune-01 study showed no significant change in RAL-MAR arm, but significantly increased in the RAL+MAR arm with a trend in CD4 (p = 0.03) at the W56 vs EM. At W56 GAG gene (HIV DNA/10^6 cells subset) in the RAL+MAR arm compared to RAL-MAR arm (p = 0.008, p = 0.03, respectively), not shown.

Data files uploaded into Ingenuity Pathway Analysis (IPA) software.

Human Genome-wide Transcripts

Direct comparisons between subsets did not find any differentially expressed gene among and between arms.

- Comparing control and W56 CD4+ TCM with uninfected CD4+ TCM from healthy donors we observed:
  - no difference in RAL-MAR arm (data not shown)
  - at W56 in RAL+MAR CD+ TCM culture predicted significantly higher activated pathways than of healthy control (Table)

- At W56 a major contribution of both CM and TM compared to EM, both in proportions and absolute values, was observed.

The EraMune-01 Study Group


Conclusions:

A year long strategy combining a cycle of IL7 injections plus MVC+RAL intensification did not show major changes in HIV reservoir nor in HIV transcriptional activity among both arms (5/8 CM and 7/8 TM) while antiCD3+CD28+IL2+IL7 stimuli induced HIV production in all tested sorted samples at D0 and in CM at W56. Finally no increase in 0.04)

Human Transcriptome

Reservoir Distribution

Background

HIV reservoirs studies in the distinct major subsets of resting CD4+ T-cells from chronically HIV-infected patients:

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