compared with atazanavir-ritonavir (IIP, 4.91 [2]), in the ongoing randomized comparison of regimens including these drugs (AIDS Clinical Trials Group protocol A5257, clinicaltrials.gov identifier NCT00811954).

Acknowledgments

Potential conflicts of interest. T.J.H. is the recipient of a Bristol-Myers Squibb Virology Fellows grant. H.R. has served on the data and safety monitoring board for Koronis Pharmaceuticals and has received honoraria from Roche Diagnostics. D.R.K. is a consultant to and/or has received research support or honoraria from Abbott, Boehringer-Ingelheim, Bristol-Myers Squibb, Gilead, GlaxoSmithKline, Merck, Pfizer, Roche, and ViV.

References


Table 1. Mean Coefficients of Variation (CVs) for T Cell Subset Parameters Measured at Baseline and Daily for Next 3 Days

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean CV (range), %</th>
<th>Mean CV over 3 days, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute cell count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD4</td>
<td>5.90 (0.18–14.27)</td>
<td>4.25 (0.00–15.01)</td>
</tr>
<tr>
<td>CD8</td>
<td>6.58 (0.10–16.31)</td>
<td>5.37 (0.90–12.30)</td>
</tr>
<tr>
<td>CD3</td>
<td>5.87 (0.27–16.09)</td>
<td>4.37 (0.20–12.37)</td>
</tr>
<tr>
<td>Percentage of lymphocytes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD4</td>
<td>3.92 (0.04–8.54)</td>
<td>2.51 (0.05–7.47)</td>
</tr>
<tr>
<td>CD8</td>
<td>3.15 (0.19–6.91)</td>
<td>2.30 (0.07–6.97)</td>
</tr>
<tr>
<td>CD3</td>
<td>1.88 (0.10–6.01)</td>
<td>1.33 (0.15–3.66)</td>
</tr>
<tr>
<td>Total lymphocyte count</td>
<td>6.97 (0.35–15.57)</td>
<td>4.18 (0.05–13.13)</td>
</tr>
<tr>
<td>CD4:CD8 ratio</td>
<td>4.70 (0.00–12.45)</td>
<td>3.30 (0.00–11.59)</td>
</tr>
</tbody>
</table>

NOTE. For blood samples of 19 individuals infected with human immunodeficiency virus (HIV) has led to the introduction of weekend HIV clinics in many hospitals. In places where laboratory facilities operate on weekdays only, blood samples may wait 2 to 3 days before T cell subset enumeration is performed. Guidelines from the British Committee for Standardisation in Haematology, published in 1997, stipulate that CD4 cell counting should be performed within 18 hours after venesection [1], whereas those from the Centers for Disease Control and prevention, published in 2003, recommend testing within 48 hours [2]. In view of these differing guidelines, we performed sequential daily T cell subset enumeration by flow cytometry for 4 days on a set of consecutive blood samples received for CD4 cell counting to determine whether the samples could provide reliable results over this time.

Nineteen edetic acid–anticoagulated blood samples from HIV-infected individuals were received for CD4 cell counting on the appointed day (the laboratory is registered with United Kingdom National External Quality Assessment Service [3]). We used Multitest CD3/8/45/4 kits with TruCount tubes (Becton Dickinson) in accordance with the manufacturer’s instructions, a method that uses both single-platform and CD45-side scatter gating technologies [4] that improve

T Cell Subset Enumeration and Weekend HIV Clinics: Reliable Performance of CD4 Cell Counts after 3 Days

To the Editor—The expansion and improvement of services for people infected with human immunodeficiency virus
the accuracy of CD4 counting [1, 5]. T cell enumeration was performed once on the day of venesection (baseline measurement) and once on each sequential day for a total of 4 days by an experienced operator. Samples were run on a FACSCanto II flow cytometer (Becton Dickinson). Blood samples were maintained at room temperature in the laboratory and treated the same as routine clinical samples.

The median age of the 19 subjects was 37 years (range, 23–63 years), and 11 were male. Mean absolute CD4 cell counts were 422 cells/μL (range, 260–890 cells/μL), and CD4 counts as a percentage of lymphocytes were 23% (range, 26%–35%). Each day, from day 2 through day 4, the mean coefficient of variation (CV, calculated from the baseline value and the value on that day for each sample) was <7% for all 8 parameters: CD4, CD8, and CD3 lymphocyte absolute and percentage counts; total lymphocyte count; and CD4:CD8 ratio (Table 1). There was no increase with time in mean CV from baseline measurement for any parameter (P > .4 for all comparisons; Student t test).

The mean CV from baseline across the 3 days was greater for CD4, CD8, and CD3 absolute lymphocyte counts (5.18%) than for percentage counts (2.72%). The mean CV for absolute CD4 was 5.07%, and the mean CV for CD4 as a percentage of lymphocytes was 3.33%. This is different from the mean CV for same-day intrassay variability for our laboratory of 4.84% for absolute CD4 (P = .85; Student t test) and 4.47% for CD4 as a percentage of lymphocytes (P = .27; Student t test). The largest mean CV was for CD8 absolute counts (5.68%), and the smallest mean CV was for CD3 as a percentage of lymphocytes (1.75%). There was no consistent trend for any parameter with time. The CVs over the 4-day time course are consistent with previous flow cytometry studies that used in-house protocols and that were published by us and others from the developed [5] and developing [6] world. Our findings indicate that T cell enumeration can be reliably conducted by flow cytometry 3 days after venesection and therefore on Mondays after weekend clinics.

Acknowledgments

Financial support. GlaxoSmithKline (clinical research fellowship to C.A.M.).

Potential conflicts of interest. All authors: no conflicts.

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References


To the Editor—Truth in science is established through open debate in an independent process. The scientific process fails when one side of a debate sets the rules, controls the arena, and ensures that its viewpoint prevails. Sadly, this is what the Infectious Diseases Society of America (IDSA) has done in the “vindication” of its beleaguered 2006 Lyme disease guidelines described in the final report of the Lyme Disease Review Panel [1].

The Review Panel was mandated by an antitrust settlement agreement with the Connecticut Attorney General, who found substantial flaws in the IDSA Lyme guidelines development process [2]. Yet the guidelines review was far from independent. It was run by the IDSA, which selected the Review Panel members (7 of 8 were members of the IDSA), selected the chair (a past president of the IDSA), chose the speakers, and essentially acted as judge and jury [3, 4].

An ethicist paid by the IDSA screened panel members for financial conflicts of interest but failed to consider classic organizational bias: given the IDSA’s stake in vindicating its guidelines to reduce potential litigation exposure, maintain its reputation, and silence competitors, how could IDSA members be impartial? Selecting panel members with organizational conflicts of interest while systematically excluding the physicians who treat the majority of Lyme disease patients resulted in a biased review panel [3].