Reviewer's report

Title: Thromboelastography on plasma reveals delayed clot formation and accelerated clot lyses in HIV-1 infected persons compared with healthy controls

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Reviewer: Nathan White

Reviewer's report:

The authors present an interesting snapshot of plasmatic clot formation in treated HIV patients vs. normal controls. The results are interesting, showing an overall hypocoagulable state with increased lytic susceptibility. While, very interesting, the manuscript is also quite complex and confusing given the wide range of coagulation, platelet, and endothelial markers presented. There are also several key omissions from the data which require acknowledgment. A more concise reporting of the results is needed in this case.

Major Compulsory Revisions;

1. The goal of "comparing the vascular system" is to broad, please refine and present a specific hypothesis to be tested. Limiting the investigations to direct measurements of fibrin clot formation, which are the strongest results, would provide more focus and clarity.

2. The key finding of a functional hypocoagulable state with increased lytic susceptibility would benefit from further investigation. If plasma samples remain, please consider adding measurements of thrombin generation (PF 1-2), fibrin activation (fibrinopeptide-a), fibrinogen concentration, plasminogen concentration, and D-Dimer. If these are unavallable, please acknowledge the limitation.

3. Please report all TEG parameters for each group, including the runs with added tPA. In addition, the Angles are very low in the HIV group, yet the MA are very similar. This is an inherent limitation of using TEG, in that MA is not measured at a standardized time during clot formation. Please also report the time to MA (TMA), which may shed more light on the different results between groups. Also consider reporting the 1/2 lysis time. (the total time from start of the run to achieve 1/2 of the MA during lysis). This is a more standard way to report fibrinolysis.

4. The TEG results may be mostly explained if the fibrinogen concentration is known for each sample. This is a major limitation.

4. The results do not necessarily support that the vasculature is activated similar to results found in critical illness, as stated in the conclusion.....please revise.

Discretionary revisions:
5. Line 280 "with reduced fibrinolytic resistance as assessed by TEG and also we found evidence for enhanced plasma activation in vivo."....should this read “platelet activation” instead?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests