Reviewer's report

Title: Thromboelastographic Evaluation of the Effects of Recombinant Factor VIIa on Dilutional Coagulopathy

Version: 2 Date: 23 December 2004

Reviewer: Michael Avidan

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Minor Essential Revisions:

The authors state that their study clearly demonstrates that commercially available reagent kits provided by the manufacturer were unable to give us an instrument that could be used to evaluate the effects of HES hemodilution and the addition of rFVII. I do not think that this statement is justified. If rFVII does not correct the coagulopathy induced by HES, the study has proved nothing. ROTEG may still be useful for evaluating the efficacy of rFVII in other settings. I think that this study has not clearly distinguished between two possibilities: 1) that rFVII is not useful in this setting or 2) that ROTEG does not detect the effects of rFVII in this setting.

The title is improved, but the words "in vitro" should be added: "...on coagulopathy induced by in vitro administration of hydroxy ethyl starch."

In the discussion it should clearly be stated that this study is limited to evaluating the usefulness of ROTEG in evaluating the effect of rFVII on the coagulopathy induced by HES. As I have reasoned above, I do not think that this study meets even this limited objective.

The authors continue to assume that rFVII corrects the coagulopathy induced by HES and the problem therefore is with the ROTEG. They base this assumption on the evidence that rFVII may be useful for treating some other disorders of platelet function. This assumption may not be valid.

The concerns about temperature have been satisfactorily addressed.

It would have been a more realistic model if the HES was added in vivo, rather than in vitro.

Abstract:
The authors still refer to a dilutional coagulopathy in general and not to HES specifically in the introduction.

My advice / overall feeling:

I think that the authors have done their best to address most of the concerns that have been raised. I still have some reservations about the
scientific merit of this study. If the limitations of the study are clearly expressed, it may generate useful discussion and possibly direct further research. I am still not strongly supportive of this publication on the grounds of its scientific limitations.