Reviewer’s report

Title: Polymorphisms on PAI-1 and ACE genes in association with fibrinolytic bleeding after on-pump cardiac surgery

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Reviewer: Luca Spiezia

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Major Compulsory Revisions

The authors described the role of two polymorphism (i.e. PAI 1 -844 G/G and ACE Intron 16 I/I) as possible predictors of blood loss after cardiac surgery due to enhanced fibrinolysis. The study is a small appendage of a previous paper published in this journal (Ozolina A et al. BMC Anesthesiol. 2012;12:27). The results of this study are, to me, minimal and could be condensate in a "Letter to the Editor" or in a "Short report".

As far as the message of the paper is concerned the authors stated that the mechanism of action of the two polymorphisms should be related to an increase in the fibrinolytic potential but no specific assays neither in this nor in the previous publication (i.e. euglobulin lysis time, whole blood thromboelastometry/thromboelastography) was made to evaluate the contribution of the real increase of the fibrinolytic system in the clot lysis.

The peculiar model of the patients enrolled in this study (patients undergone CPB) is very complex to study, in particular as far as the coagulation field is concerned. In my opinion in order to better identify the weight of every single possible confunders in relation to the end point of the study (bleeding complications) a multivariate analysis has to be performed.

I don’t understand why patients with surgical bleedings were excluded by the analysis? The hyperfibrinolysis could justify surgical bleedings, isn’t it?

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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’