Reviewer’s report

Title: The REFLO-STEMI Trial comparing intracoronary Adenosine, Sodium Nitroprusside and standard therapy for the attenuation of infarct size and microvascular obstruction during primary percutaneous coronary intervention: study protocol for a randomized controlled trial.

Version: 3 Date: 30 August 2014

Reviewer: Goran Olivecrona

Reviewer’s report:

The authors should be highly commended for undertaking this very important study entitled REFLO-STEMI. The study fills a gap of many other similar studies shortcomings.

This is a study to evaluate whether infarct size can be reduced by an absolute reduction in infarct size of 5% (RR 25%) through intracoronary injections of Adenosine and Sodium Nitroprusside before and after Stent placement. All patients are planned to undergo thrombus aspiration and receive pretreatment with latest generation P2Y12 inhibitors as well as Bivalirudin. Patients are then evaluated for infarct size and area at risk and extent of microvasacular obstruction through cardiac MRI among many others.

The manuscript is exceptionally well written.

The hypothesis, design and methodology of the trial is very well thought out and described in the in the manuscript.

The statistics seem adequate (although I am perhaps not the best judge here).

The language in the manuscript is flawless.

I recommend to accept this manuscript in its present form

Level of interest: An exceptional article

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 interestst