Reviewer's report

Title: Impact of newly diagnosed abnormal glucose regulation on long-term prognosis in low risk patients with ST-elevation myocardial infarction: a follow-up study.

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Reviewer: Claudio Picariello

Reviewer's report:

In the present investigation, the Authors investigated the impact of abnormal glucose regulation classified by an OGTT in-hospital and at three-month follow-up on clinical outcome in patients with acute ST elevation myocardial infarction (STEMI) without previously known diabetes submitted to primary PCI. According to their results, patients with a primary PCI treated STEMI, without previously known diabetes, appear to have good long-term prognosis, independent of the glucometabolic state classified by an OGTT in-hospital and at three-month follow-up (no differences in logistic regression)

Major compulsory revisions can be raised:

- the population studied is too “selected”: young (median age # 61 years), hemodynamically stable (exclusion criteria: cardiogenic shock, renal failure, on-going chest pain, persistant hyperglycaemia), very few comorbidities, one-vessel disease and very low troponin T peaks in respect to clinical condition (STEMI, median values about 5 ug/L, higher value 10 ug/L). This population itself has a very low risk of complications. Patients enrolled in the present investigation do not mirror the real world scenario. This should clearly be stated and discussed in the “Limitations” the study.

- The Authors should clearly underscore the differences between data reported in the present investigation and those described in the pilot-study published by the Authors in 2009. In other terms, what are the novelty in the present findings.

- At page 8, line 14-15 “glucose lowering medication was not introduced….": not previously known diabetic patients do need anyway to be discharged with appropriate therapy according to glycemic control during ICCU staying.

- Latest papers regarding on glucose control in uncomplicated and in complicated STEMI (cardiogenic shock) should be updated and discussed, in particular the following:


Minor essential revisions:
- In Tab.1 please specify “in hospital” and “3 months “ group inside the table and not only in the caption.
- At page 4, line 10 “STEMI were included if they were stable”: does it mean also hemodynamic status? If yes, please define it.
- At page 4, line 12 “clinical signs of heart failure”: definition of heart failure is arbitrary. Guidelines should be followed (ESC 2008, ACC 2009).

**Level of interest:** An article of importance in its field

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests