Reviewer’s report

Title: The role of remote ischemic preconditioning on postoperative kidney injury in patients undergoing cardiac and vascular interventions: a meta-analysis

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Reviewer: FRANCESCO SEDDIO

Reviewer’s report:

Dr Lan Li and his colleagues have presented an excellent analysis of series of patients published in the last years about the remote ischemic preconditioning providing renal protection to patients undergoing cardiac and vascular interventions.

Two investigators independently identified the published randomized controlled trials. A total of 10 papers were eligible for this analysis (924 participants; 6 studies for pts undergoing cardiac surgery; 1 studies for pts with percutaneous coronary intervention and 3 studies in vascular surgery). The generation of a randomisation list was adequate in 8 trials.

They have clearly demonstrated that in this analysis the difficulty starts from the definition of acute kidney injury applied by different investigators and correctly they conclude that large-scale trials are necessary to investigate the potential effects of remote ischemic preconditioning against acute kidney injury. Also they experienced the difficulty on the data of serum creatinine available in only 4 trials. They stated that the serum creatinine levels on the 1st postoperative day did not differ significantly and in the 2nd postop day too. The mortality was reported in nine trials. No statistically significant difference in the overall mortality between two groups. Also no statistically significant difference it was in Hospital stay, ICU stay. Moreover The authors performed also a subgroup analysis for patients undergoing cardiac surgery.

I have a few questions for Dr Lan Li. (Minor Essential revisions)

1) The limit of the present study is the small number of studies.
   Of course this is a difficult set of patients and the authors tried to reduce the heterogeneity inside the groups, however I encourage the authors to find, if possible, a larger number of studies to analyse. In fact they have only 3 studies for patients undergoing vascular surgery.

2) In your manuscript you reported a subgroup analysis for patients undergoing cardiac surgery. Please could you tell us more about the role of RIPC on renal protection in this subgroup?

3) The authors conclude that there is no evidence that RIPC provides renal protection. Could the author comment this sentence?

Again I congratulate Dr Lan Li and colleagues on describing this meta-analysis.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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 below