

Reviewer's report

Title: Endotoxemia is associated with Acute Coronary Syndrome in Patients with End Stage Kidney Disease

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Reviewer: Jonathan Erlich

Reviewer's report:

Atherosclerosis has at least in part an important inflammatory component and activation and regulation of coagulation and platelets is important for vascular obstruction leading to coronary syndromes. The investigators seek to determine if elevated endotoxin levels in patients with end-stage renal failure might be associated with acute coronary syndrome and hence potentially contributing to vascular thrombosis. The investigators suggest gastrointestinal permeability to bacteria may lead to recurrent and elevated levels of lipopolysaccharide.

However their studies of evidence of bacterial genome in patients blood did not support the hypothesis of recurrent bacteraemia. It is however possible that if bacteraemia were transient and rapidly cleared they may miss such episodes.

There may also be issues of sensitivity that technique and it would have been good for them to show some positive controls to confirm the technique works.

It was not clear why markers such as CRP were not measured.

Regarding the diagnosis of acute coronary syndrome it would be valuable to have more demographic information on the patient's and a clear definition of what was considered as acute coronary syndrome. It was also not clear what if any drugs patients were taking on what effect these may have.

There was also no comment on dental hygiene which can certainly contribute to bacteraemia. The state of patients periodontal health may well be important and certainly periodontal health has been discussed as a important contributing factor to coronary artery disease.

Although one imagines the blood tubes used to collect blood would be in a endotoxin free this needs to be stated.

Is not clear from the text whether the patients with ESRD were on dialysis or not and whether this was haemodialysis or peritoneal dialysis. Clearly this would have major bearing on the study.

What is also not clear from the demographic information is what is the proportion of patients with gastrointestinal or periodontal problems or other potential infectious lesions between the

groups. Clearly this would be very important. Without good clear controls it is even hard to conclude that endotoxaemia is clearly associated with ACS.

It would have been useful to know if the elevated endotoxin levels were associated with any other findings such as activation of coagulation or other inflammatory markers such as CRP. The lack of association of endotoxin with troponin -I suggests that there was minimal effect on blood clotting or platelets.

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?

If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?

If not, please explain in your comments to the authors.

No

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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English

Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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