Reviewer's report

Title: Elevated soluble cellular adhesion molecules are associated with increased mortality in a prospective cohort of renal transplant recipients

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Reviewer: banu sis

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This is a prospective study relating baseline plasma levels of VCAM and ICAM to all-cause mortality of non-selected kidney transplant patients followed for approximately 6.6 years. The authors showed that both VCAM and ICAM are independent predictors of all-cause patient death after adjusting for various traditional cardiovascular risk factors.

The conclusions are supported by the multivariate analysis; however, it is not clear whether the results are generalizable to kidney transplant patient population.

The utility of these biomarkers in general kidney transplant population is not supported by the current data. The following points need to be addressed:

Major Compulsory Revisions

1) The patients with a history cardiovascular disease at enrollment had higher levels of VCAM. In addition, 27 of 73 deaths are related to a cardiovascular cause. Therefore, the results of the survival analyses might be driven by the group of cardiovascular disease-related deaths. In order to generalize the findings to renal transplant population, the authors should repeat the survival analyses after excluding patients with a history of cardiovascular disease and patients who died due to a cardiovascular disease.

2) The definition of baseline is more than 12 months post transplant in the majority of the group and it sounds that the time of VAM/ICAM testing is quite heterogeneous within the population. Therefore it is very difficult how to interpret the findings. If measuring VCAM and ICAM is clinically useful, then how would you recommend testing these markers for mortality predictions in terms of timing of the test? It would be much better if authors can analyze a subgroup of patients with a more homogeneous time of VCAM/ICAM testing.

3) Some patients with elevated levels of CAMs might have had sepsis or any other infectious etiology or perhaps allograft rejection causing endothelial activation and some others might have had elevations due to vascular inflammation/atherosclerosis. Did you look at the clinical relations of VCAM/ICAM at time of testing?

4) Are individual survival curves for VCAM and ICAM thirds different from each other?
Discretionary Revisions
5) Did VCAM and ICAM also predict future graft function and graft failure?

Minor Essential Revisions
Table 4 needs formatting.

Level of interest: An article of importance in its field

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 interests.