Reviewer's report

Title: Plasma neutrophil gelatinase associated lipocalin (NGAL) is associated with kidney function in uraemic patients before and after kidney transplantation

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Reviewer: John Sayer

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Review of manuscript

Plasma neutrophil gelatinase associated lipocalin (NGAL) is associated with kidney function in uraemic patients before and after kidney transplantation

This manuscript examines a cohort of CKD and ESRD patients. This patient group has previously been used for other published studies.

The aim of the study is to “to investigate the possible relationship between plasma NGAL levels and clinical parameters in a prospective study of non-diabetic uremic patients.”

I am not sure this aim has been fulfilled in the manuscript in its present form. The clinical parameters are not well described and there is too much emphasis within the paper of the methodology of NGAL measurement. I am unclear as to the significance of the association between homocystine and NGAL and the data remains too preliminary for this association to be certain. In absence of this, the association of renal function and NGAL is not a novel finding. Perhaps the study should concentrate of the patients whom received transplants to show that NGAL correlates with rapidly improving renal function. Other interesting clinical questions need to be addressed. For example: Will the NGAL levels ever normalise in a transplant patient with excellent renal function and how long does this take? Will NGAL ever be a valid marker in renal transplantation given the confounders of renal mass, prednisolone therapy etc. A more clinically relevant discussion would be welcome.

Major comments:

Figure 1 is not well drawn, and needs to be redraw using different scales for the different time points, or an alternative method needs to be adopted to show the change in NGAL over time, perhaps as a time line for each individual?

Figures 2 and 3 relate to the NGAL assay and its methodology. This manuscript should focus on the clinical relevance of the results rather than be a methodological one.

Figure 2 – lines on graph are not labelled and legend is insufficient to give meaning to the graph.
Methodology includes no mention of homocystine measurements. Are patients who have been re-transplanted at risk of higher homocystine levels? Does homocystine relate to renal mass in any way?

I am really not sure of the data in table 3; is this relevant to NGAL levels?

Minor comments

Page 2: The sentence “duration of end-stage renal failure” is misleading.
Page 4: “public announcing” needs to be rephrased.
Page 4: It is not clear to me how long before transplantation the NGAL assay was performed.
Page 5: OGTT was performed – rather than “done”.
Page 5: -800C should read -80 degrees C
Page 6: “Data analyses using clinical data were done” – performed would be better.
Page 6: Continuous data were done – performed would be better
Page 6: P value of <0.05 – the p value for each test should be stated as significant p values will differ from test to test (esp. using non parametric tests).
Page 7: define CV.
Page 8: were hence significantly reduced – rephrase please.
Page 8: may be explained – possibly explained may be better
Page 9: Tx – non universal abbreviation
Page 11: define CVD
Page 11: List of 5 studies - needs to be rewritten. E.g. Firstly, and secondly etc.
Page 11: Typo: longitudinal

**Level of interest:** An article of limited interest

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.