Reviewer's report

Title: The incidence and risk factors of acute kidney injury after hepatobiliary surgery: a prospective observational study

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Reviewer: Prasad Devarajan

Reviewer's report:

The authors conducted an observational prospective cohort study to evaluate the incidence of clinical and subclinical AKI after hepatobiliary surgery, to determine the risk factors for AKI, and study the significance of subclinical AKI. In general, the manuscript is well written, the methodology and aims are clear, and the scientific design and statistical methods are appropriate. In terms of content, the authors evaluated a novel concept of the significance of subclinical AKI using urinary biomarkers. The following points are offered for the authors’ consideration:

• The authors excluded patients with chronic kidney disease with eGFR of < 60 ml/min/1.73m2. The reason for this is not clear in the manuscript and may result in underestimation of the actual incidence of AKI following hepatobiliary surgery. The definition of AKI is based on changes in eGFR and urine output regardless of the baseline kidney function. Please clarify the rationale behind excluding these patients, and mention in the discussion as a limitation.

• Regarding the definition of subclinical AKI in the methodology section, although this definition has been used before, the authors needs to include a reference and discuss the validity of the definition to indicate that their definition has been used in other published literature.

• Ten of 131 (7.6%) of the cohort had AKI following the surgery where 5 of them had AKIN stage 1. On the other hand 20/131 (15.3%) of the cohort had a liver transplant. The authors did not specify how many transplant patients had AKI. The incidence of AKI following liver transplant can range from 17-96% (1). I am concerned that most AKI occurred in this group of patients which makes the generalization of the authors’ results on the population of hepatobiliary patients invalid.

• The authors chose to obtain both serum and urinary NGAL where serum NGAL did not show any significant predictive value. Both urinary and serum NGAL perform almost equally in predicting AKI (2,3). Can the authors comment of this discrepancy in their results and the potential roles of serum versus urine NGAL in predicting AKI in their population?

• It is not clear how the authors elected to include the variables in the multivariate regression model. Many of the chosen variables were insignificant in univariate analysis though it was included in the multivariate analysis.
