Reviewer's report

Title: Urine YKL-40 is associated with progressive acute kidney injury or death in hospitalized patients

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Reviewer: Julia S. Johansen

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General comments
This is an interesting retrospective study of urine concentrations of YKL-40 and NGAL determined in 249 patients with acute kidney injury. 29% (n=72) of the patients progressed or died in-hospital. A urine YKL-40 concentration of > 5 ng/ml had an adjusted OR of 3.4 (95% CI 1.5-7.7) for the outcome of the patients. The addition of urine YKL-40 to a clinical model or urine NGAL for predicting the outcome significantly improved risk classification.

The authors suggested that urine concentrations of YKL-40 may have utility as a biomarker of severe kidney injury. This is novel observations, but has to be validated in an independent cohort of patients with acute kidney injury.

Specific comments

Methods
More information should be given regarding the ELISAs for measurement of urine concentrations of YKL-40 and NGAL (i.e. commercial available, sensitivity, specificity, intra- and interassay variation).

What are the normal levels of urine YKL-40 and NGAL in healthy subjects.

Results
The mean ± SD or median (range) of urine YKL-40 and NGAL concentrations in the patients divided into different diseases (e.g. pre-existing CKD, pre-existing proteinuria, ACEi/ARB at enrolment, hypertension, diabetes, CHF, CAD, stroke, liver failure/cirrhosis, active cancer) should be given in a new table.

Was urine concentrations of YKL-40 correlated with age, serum creatinine and GFR?

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