Reviewer's report

Title: Incidence and outcome of contrast-associated acute kidney injury in a mixed medical-surgical ICU population: a retrospective study

Version: 2 Date: 8 October 2012

Reviewer: Thierry Krummel

Reviewer's report:

* Major Compulsory Revisions:
- The bibliography is not up to date, some recent publications are missing, for example: Valette et al., J Crit Care 2012; Lakhal et al., J Crit Care 2011
- In the "background", it is noted that the outcome is unclear except in one study. It's not true, the outcome has been studied in other papers, for example in the reference 12 and in the two papers referenced above.
- In the second paragraph of the "Discussion" it is noted that administration of ICM is a high risk procedure and that the possibility to use RRT should not be an argument to force radiologists to administer ICM. I agree but it must be added that even if their benefits have not yet been demonstrated in the ICU setting, preventive procedures should be used and especially volume expansion and hemodynamic optimization.
- In the third paragraph of the "Discussion": I disagree with the fact that the preventive measures are of uncertain efficacy. The paper corresponding to the reference 9 is retrospective and the groups with and without CA-AKI differed not only on the preventive measures, but also on the basal renal function and the hemodynamic status which are potent predictors of CA-AKI.
- It should be interesting to have informations about the fluid balance in the patients included for two reasons: First, with the AKIN criteria (increase in serum creatinine of only 26 µmol/L) the identification of AKI could be biased by hemodilution. Second, ICU outcome is influenced by fluid balance and this could explain at least part of the worse outcome in the CA-AKI patients.

* Minor Essential Revisions:
- In the "Background" paragraph: please change "Despite CA-KI" into "Despite CA-AKI"
- In the "Discussion" paragraph: PP-AKI is often noted instead of CA-AKI

The year of publication is missing in several references

* Discretionary Revisions:
- In the "Background": the incidence of the CA-AKI is not only dependant on the studies, but also on the definition used (cf Lakhal, J Crit Care 2011)
- To bring us new informations from what is already known, you should add in
your paper datas about the incidence of RRT and the mortality of the patients who were treated with RRT in the same period but who were not administered ICM.

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

**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