Reviewer's report

Title: Empiric guideline-recommended weight-based vancomycin dosing and nephrotoxicity rates in patients with methicillin-resistant Staphylococcus aureus bacteremia: a retrospective cohort study

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Reviewer: Federico Pea

Reviewer's report:

Hall II and coworkers assessed the influence that empiric guideline recommended weight-based vancomycin dosing may have on the incidence of nephrotoxicity among patients treated with vancomycin because of MRSA bacteremia

Major Compulsory Revisions

1. The authors included in the study all the patients treated at least for 48 H with vancomycin, but unfortunately neither duration of treatment nor stratification of the nephrotoxicity risk in relation to the length of treatment were analyzed. This needs attention

2. The authors split the patients into two groups according to vancomycin dosing. However, it must be specified the dose range more than the minimum threshold.

3. Being this a multicenter study, did the different institution use the same vancomycin assay ? This must be explicitated.

4. Table 1: Importantly, patients receiving lower dosing has a significantly higher weight (median of 88 vs 63 kg) and baseline CLCr (86 vs 71 mL/min). These may represent major bias in the analysis.

5. It's unclear how the authors chose the dimension of some covariates (e.g. age > 52 yrs; weight > 100 kg)

6. It would be more appropriate to assess the influence of BMI rather than of TBW on the nephrotoxicity risk considering that vancomycin is an hydrophilic compound.

7. It's unclear what this study should add to the literature considering that most of the discussion is speculative and simply confirmatory of other authors' findings.

8. In the final sentence the authors surprisingly stated that none of the institutions utilized formal vancomycin TDM. What does this mean ? This requires attention in the methods where it must be explained when TDM was performed after starting therapy and how often it was repeated in each patient.

Minor Essential Revisions

1. Table 2: data on the infection source are unesseful for the purpose of the study. They maual be summarized in the text
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:

none