

Name of Journal: World Journal of Cardiology

Title: Impact of Gout on In-Hospital Outcomes of Acute Coronary Syndrome-Related Hospitalizations and Revascularizations: Insights from the National Inpatient Sample

Manuscript NO.: 46644

Column: Retrospective Study

Dear Editor,

My co-authors and I have received the review of the above-referenced manuscript. We are very appreciative of the time and effort that you and reviewers have dedicated to our manuscript. Furthermore, we are most appreciative for the helpful remarks and believe they have identified areas where improvement was possible. Please find our responses below in the order of the reviewers' comments:

Reviewer1:

This paper entitled "Impact of Gout on In-Hospital Outcomes of Acute Coronary Syndrome-Related Hospitalizations and Revascularizations: Insights from the National Inpatient Sample" shows nicely that gout was not independently associated with an increased risk of post-revascularization in-hospital mortality in ACS, but the presence of gout did increase post-revascularization complications. This is an interesting research in the current context but the paper lacks of some details that could be of importance, that I will mention through the review:

1. The introduction is well written but a better justification for the role of uric acid in post PCI complications is needed

-Thank you for the suggestion. The role of uric acid in post PCI complication has been addressed in the introduction of the manuscript. Microvasculature lesions have been considered prognostic markers in patients undergoing PCI. Interestingly, uric acid has been linked to play a major role in microvascular lesions accounting for cardiovascular complications.

2. Which is the amount of missing data? Why not propensity score matching for analysis to check the impact of gout presence or not with such big data? Probably we are facing a selection bias

-We have addressed this questions and mentioned briefly about missing data. And included the revised data with propensity-score matched analysis as a supplementary data.

3. In the results, I miss the incidence of gout attack during the admissions, that could be important data to be shown.

We completely agree with this observation. Unfortunately, due to the retrospective nature of the data and unavailability of specific ICD-9 CM codes for the same, this information was not available at the time of admission. However, we believe the incidence of gout at the time of admission would not impact the outcome of our study since we have considered patients who already have existing gout diagnosed and those who don't. Furthermore, if any patients were diagnosed during their time of

hospitalization, it would have been included as their secondary diagnosis, which we have taken into consideration in our sub-group analysis.

4. The discussion and limitation are well presented

Thank you for the feedback.

Reviewer2:

This is a retrospective population-based study, which aimed to evaluate the impact of gout on the in-hospital outcomes of ACS hospitalizations, subsequent healthcare burden and predictors of post-revascularization inpatient mortality using the largest nationwide cohort from January 2010 through December 2014. This is probably one of the few studies to describe the impact of gout on outcomes of ACS hospitalizations in terms of healthcare resource utilization including revascularization, the ensuing economic impact and the predictors of post-revascularization inpatient mortality. However, as the NIS database does not contain information on serum uric acid level in gout patients so the severity and the extent of worse outcomes in ACS and post-revascularization outcomes with a unit increase in uric acid levels were not possible to be evaluated. Furthermore, the study emphasizes the short-term in-hospital impact of gout, lacking the long-term follow-up outcomes. The authors concluded that, although gout did not increase the in-hospital mortality in ACS-related hospitalizations, the findings from a nationwide cohort highlight the significant impact of gout on in-hospital outcomes in ACS patients in terms of higher cardiovascular comorbidities, CABG frequency, post-revascularization complications, hospital stay, and total hospital charges. The number of patients enrolled is large, the design

and the presentation of the data is very good and I think that the paper gives clear messages and is suitable for publication in the journal

Yours sincerely

-We appreciate and thank you for your feedback.

Reviewer 3

Dear Editor, I read this manuscript and I think that the paper is good and well written.

-We sincerely appreciate your feedback.

Reviewer 4

Dear the Authors i want to congratulate you for the excellent work you did in writing this informative manuscript which looks at the rate and impact of hyperuricemia in patients with acute coronary syndrome The data are derived from representative sample and conclusions and recommendations can be popularized on national level personally i have no concerns about this manuscript

--We sincerely appreciate your feedback.

List of changes we have made to the revised manuscript:

- We have addressed all the comments provided in our manuscript and made changes accordingly.
- Abstract has now background section (less than 100 words) and aim has been modified (less than 20 words).
- Introduction section explained the linkage between uric acid and post PCI complication.
- Table numbers have been updated within texts.
- Propensity-score matched analysis has been conducted and results were attached as supplementary tables.