Thank you for the reviewers and editor' comments concerning our manuscript, these comments are all valuable and very helpful for reviewing and improving our paper. We have studied comments carefully and have made revisions, we hope our revisions will meet with your approval. The main corrections in the paper and the response to the reviewers and editor's comments are as below:

Reviewer #1: Title and abstract: The title is appropriate. The abstract will benefit if it can be more concise, only main findings need to be highlighted and conclusion can be further summarised.

2. Introduction: As G6PD is highly prevalent among the population, this information need to be highlighted. Additionally, the different G6PD mutations common to this populations and the UGT1A1 mutation relevant also need to be introduce here.

3. Methodology: Need to be clearer- i.e. as the data was mainly retrospective for the etiology section, this i believe did not require written informed consent. The informed consent is for the prospective data on the mutation analysis, which I believe the case-do clarify this.

4. Results: Figure 1: the figure is not correct, as the mini pie chart is illustrated to be from the F rather than the E section. Additionally, Table 1: "Total" item is not required or if want to be included please separate it from the items. For the description in section 2.1, please emphasize that the clinical characteristics are pertaining to the 580 newborns with severe hyperbilirubinaemia and not the 1602 newborns.

5. Discussion and conclusion: the first 2 paragraphs of the discussion section is totally not relevant to this section. In this section, the authors might want to discuss why and how the results can change the management of hyperbilirubinaemia.

6. General Structure and English: Although this article had underwent an English editing based on certification, I still found some grammatical and syntax mistakes in the text. Some of the sentences require restructuring and rewriting. Hope the comments will be helpful to improve the manuscript.

Responses: Thank for your suggestion.

Here are my response.

Question 1. We have streamlined the contents of the summary, highlighting the main findings and conclusions.

Question 2.We added the introduction of G6PD and UGT1A1 mutations in the "introduction", the prevalence of G6PD in the population was introduced.

Question 3.Our research data are retrospective data on the etiology, and the description of informed consent was added in the revised manuscript.

Question 4. We have revised the errors in Fig 1 and Table 1. In the description of section 2.1, we had emphasized that the clinical characteristics of 580 newborns with severe hyperbilirubinemia.

Question 5. We have deleted several sentence in the first two paragraphs of the discussion section.

Question 6.   We have made further language refinements for the revised manuscript.

Reviewer #2:It is a good idea to find the etiology of hyperbilirubinemia and to reduce the incidence of severe hyperbilirubinemia and its serious complications. The sample size of 1602 term newborns with hyperbilirubinemia is large. The results show that, for the 580 neonates with severe hyperbilirubinemia, neonatal hemolysis accounted for 15.17%, breast milk jaundice accounted for 12.09%, infection accounted for 10.17%, G6PD deficiency accounted for 9.14%, the coexistence of multiple etiologies accounted for 6.55% and unknown etiology accounted for 41.72%. The authors' comment for the unknown etiology is too simple. It will be better if the authors give more detailed explanation for the high percentage of unknown etiology.

Responses:

Thank you.

We had given a more detailed explanation of the high proportion of unknown etiology in the discussion part of the article.

Such as below:

"Previous studies have shown that mutations of other genes, such as heme oxygenase-1 (HO-1), biliverdin reductase A (BLVRA), and solute carrier organic anion transporter family member 1B1 (SLCO1B1) could also affect the serum bilirubin"

EDITORIAL OFFICE'S COMMENTS

Authors must revise the manuscript according to the Editorial Office's comments and suggestions, which are listed below:

(1) Science editor:

The manuscript has been peer-reviewed, and it's ready for the first decision.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade C (Good)

(2) Company editor-in-chief:

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Clinical Cases, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor. In order to respect and protect the author's intellectual property rights and prevent others from misappropriating figures without the author's authorization or abusing figures without indicating the source, we will indicate the author's copyright for figures originally generated by the author, and if the author has used a figure published elsewhere or that is copyrighted, the author needs to be authorized by the previous publisher or the copyright holder and/or indicate the reference source and copyrights. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following

Responses: We have revised and submitted as required.

Once again, thank you very much for your comments and suggestions.