Review 1: "Severity of Illness Caused by Severe Acute Respiratory Syndrome Coronavirus 2 Variants of Concern in Children: A Single-Center Retrospective Cohort Study"

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RR:C19 Evidence Scale rating by reviewer:

- **Reliable.** The main study claims are generally justified by its methods and data. The results and conclusions are likely to be similar to the hypothetical ideal study. There are some minor caveats or limitations, but they would/do not change the major claims of the study. The study provides sufficient strength of evidence on its own that its main claims should be considered actionable, with some room for future revision.

Review:

My recommendations and instructions for peer review are the following:

1. Based on the Strength of Evidence scale, this manuscript can be qualified as RELIABLE. The preprint is justified by its methods and data, and their conclusions would likely be similar to a hypothetical ideal study.
2. The structure of the investigation has been designed and conducted properly; therefore, the results are credible and reproducible in similar future studies (with similar epidemiological conditions, it is understood). Surely, similar results would be observed with a large sample in other studies made in occidental cities in the United States or Europe.
3. Tables and graphs are structured correctly and are easy to read and interpret. Regarding the figures, Figure 1 is difficult to understand, and the legend does not clearly demonstrate the comparison with adults' data enough. At least, for me, it is not easy to translate the relationship between pictures and text. However, I have nothing to object to for Figure 2.
4. The methods, singular definitions, and statistical analyses provide potential readers with an interesting tool for better interpretation of results. In addition, explanations about whole genomic sequencing would allow a clearer understanding of the rest of the manuscript.
5. In their results, specific cohort data are adequate, and the note about markers of severity is revealing for further understanding in the subsequent discussion. Establishing the association among different variants of concern and future outcomes is the main strength of this work.

6. Regarding the discussion, I agree with the authors in the limitations that they recognize. For me, the important limitations are the small sample size, single-center study, and poor comparison with adults, in that order. On page 12, the paragraph that begins: "*Perhaps reassuringly, as October 2021.....Brazil (6.1%) and Chile (4.3%).*" This line is not clearly explained because of different percentages in text and several countries.
7. Finally, while gamma exhibits worst outcomes and major severity, delta has, surprisingly, increased hospitalizations without complications while also occurring three times more frequently than gamma. This paradoxical situation is worth a more detailed explanation.