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Remarks about the study on infection-associated relapses in children with nephrotic syndrome: A short-term outcome study

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Letter to the Editor

Remarks about the Study on Infection-Associated Relapses in Children with Nephrotic Syndrome: A Short-term Outcome Study

To the Editor,

Lately, we had the privilege to read the original article entitled, “Infection associated Relapses in Children with Nephrotic Syndrome: A Short-term Outcome Study” published in the Saudi Journal of Kidney Diseases and Transplantation [Saudi J Kidney Dis Transpl. 2019;30(6):1245-53] by Mukta Mantan and Srijan Singh.¹ Here, we would draw the opportunity to extend the felicitation to the authors for their publication and scientific contribution.

The main objective of the study was to ascertain the proportion of infection-triggered nephrotic syndromes in children that resolve on therapeutic management of acute infection. Indeed, authors have touched on an area where scientific literature is still gray and needs black-and-white certainties. However, we had concern regarding the statistical interpretation of the published article. Although authors aptly used the concept of odds ratio (OR) based on prospective observational nature of the study, interpretation in results, discussion and conclusion is not complementing the findings observed through OR and corresponding 95% confidence interval (CI). We would address our query with the help of scientific evidence on how to interpret OR keeping in mind the 95% CI.

In the results section (page 1249) under the heading of “Remission achieved,” 3rd paragraph and discussion section (page 1251, 4th paragraph); authors mention that “The children

with upper respiratory tract infections (URTIs) were less likely to achieve remission (OR 1.14)” and “URTIs had lower odds of achieving spontaneous remission,” respectively. This was perhaps reported by authors in the context of very first finding of Table 5 (page 1250) where OR of acute respiratory tract infections is 1.14 with 95% CI of 0.41–3.22. The interpretation in results and discussion is perhaps misleading.

If the CI for the OR contains 1 then the calculated OR would not be regarded as statistically significant. An OR >1 suggests higher odds of spontaneous remission; an OR <1 indicates lower odds of spontaneous remission; and an OR = 1 implies either (higher or lower) odds of spontaneous remission.² Hence, if the CI possesses 1 [e.g., acute respiratory tract infection (0.41–3.22), includes 1 in the CI], then, the estimated OR of the true population might be higher or lower than 1. Hence, it is not certain whether the children with acute respiratory tract infections are more or less likely to achieve spontaneous remission based on 95% CI.

Finally, the conclusion of the study (page 1252, last paragraph) also remarks, with reference to 4th finding of Table 5 (page 1250) and discussion (page 1251, 4th paragraph), that “pneumonia is more likely to achieve remission with treatment of the underlying infection.” The OR of pneumonia is 3 with 95% CI of 0.21–42.62. Yet again, there is overlapping 1 in the 95% CI (concept explained above with

reference); therefore, even high OR of 3 is not statistically significant to conclude that children with pneumonia are more likely to achieve remission with treatment of the underlying infection.

We emphasize that the interpretation of OR must be cautiously done by simultaneously considering the value of 95% CI. We would be more than happy to receive the reply on our comments from the respected authors.

Conflict of interest: None declared.

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