https://doi.org/10.1590/1806-9282.20221377

Comment on "Factors affecting the clinical outcomes in pediatric post-cardiotomy patients requiring perioperative peritoneal dialysis"

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Dear Editor,

In a retrospective article entitled "Factors affecting the clinical outcomes in pediatric post-cardiotomy patients requiring perioperative peritoneal dialysis," the authors investigated factors associated with mortality in pediatric patients undergoing perioperative peritoneal dialysis after cardiotomy[1]. In this study, the authors found that younger preoperative age, longer cardiopulmonary bypass time, prolonged intubation, prolonged inotropic support, and need for extracorporeal membrane oxygenation were associated with a higher risk of mortality. In our opinion, although the findings of this study are of great value, there are some issues that need to be addressed.

First, some continuous variables were not properly expressed. As described in Table 1, the age of the included patients was 11.7±37.6 months. As a result, the standard deviation (37.6) is significantly larger than the mean (11.7), indicating that age is a skewed distribution variable and it should be described as median and interquartile range, not as mean±standard deviation. Similarly, the variables such as weight and preoperative PaO_2 should also be appropriately described as median and interquartile range.

Second, this study did not describe which statistical method was used to screen for risk factors associated with mortality. Providing detailed statistical methods will help improve the reliability and reproducibility of this study. Furthermore, although preoperative lower age is shown to be a risk factor for mortality in this study, the definition of preoperative lower age is unknown. We are curious about this: less than 6 months or 12 months? Evidence from a pediatric cardiac intensive care unit indicated that the age of patient less than 1 month was associated with a higher risk of mortality[2]. Thus, we believe that providing a precise definition of younger preoperative age is helpful for clinicians to give individualized treatment strategies for children undergoing cardiac surgery.

Third, more information after cardiac surgery is unknown. In such case, it is suspected that patients who die may have more red blood cell transfusion and use of vasoactive agents after cardiac surgery. Results from a previous study suggested that red blood cell transfusion was independently associated with a higher risk of mortality in critically ill children[3]. Another study[4] involving 43,441 postoperative pediatric cardiac patients displayed that the use of milrinone alone was associated with a lower risk of in-hospital mortality, while the use of all other vasoactive agents increased the risk of in-hospital mortality at least in one of the subsets. Therefore, it is necessary to provide more information after cardiac surgery (e.g., red blood cell transfusion and the use of vasoactive agents).

AUTHORS' CONTRIBUTIONS

WP: Conceptualization, Investigation, Writing – original draft. **YP:** Project administration, Supervision, Writing – review & editing.

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Conflicts of interest: the authors declare there is no conflicts of interest. Funding: none.
Received on October 13, 2022. Accepted on October 30, 2022.