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Reply to “Oxygen Saturation Index: A Trigger for Neonatal Transfer?”

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Dear Editor,

We appreciate the interest of Dr. Gopal and Dr. Fernandes in our studies on the use of the oxygen saturation index (OSI) as an early predictor of clinical deterioration in infants with a congenital diaphragmatic hernia (CDH). The authors propose an alternative usage of the OSI by incorporating it into assessment algorithms designed to facilitate timely transfer to higher level centers with extracorporeal membrane oxygenation (ECMO) therapy. This is an interesting suggestion, and we fully acknowledge the promising potential of OSI within such an approach, but underscore that this is particularly useful in health care systems where management of CDH infants is not centralized. Contrary to what is suggested by the authors, this is not the case for the Dutch setting, as all CDH infants are managed in two national expertise ECMO centers. Yet, in other conditions associated with hypoxic-respiratory failure, such as meconium aspiration, this indeed may be a very helpful strategy to expedite early transfer [1].

It is certainly true that most CDH infants will have arterial access, and thus OSI will not entirely replace the oxygenation index (OI), but we do want to emphasize that, in our opinion, also tertiary-care centers could profit from incorporating OSI into their management. For instance, in cases where preductal arterial blood sampling is not possible, OSI provides an interesting alternative. Also, OSI can be measured continuously and can thus potentially identify signs of clinical deterioration earlier than OI, given that the latter is a snapshot measurement that is often determined *ad hoc* when the clinical picture

is already changing. In addition, automated analysis theoretically gives an opportunity to perform trend analysis. On the other hand, we agree that the predictive value of OSI after clinical interventions triggered by worsening or improving OSI values remains to be investigated.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

Emily J.J. Horn-Oudshoorn, Irwin K.M. Reiss, and Philip L.J. DeKoninck were all involved in the conception of this letter. Emily J.J. Horn-Oudshoorn wrote the first draft, which was critically reviewed by all authors. All authors have approved the final version of the manuscript.

Reference

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