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LETTER TO THE EDITOR

Letter to the article by Oh et al.

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To the Editor:

We read with great interest the recent article by Oh et al. [1]. Their inspirational study on this important topic deserves further discussion. In particular, we have some concerns in regards to their study conclusion. The authors have claimed that, considering the higher stability of hypothermia with similar accuracy, nasal septum pulse oximetry may be an attractive alternative to finger pulse oximetry. However, when the core body temperature of patients was less than 36 °C, the results might not be accurate.

It is known that, inadvertent perioperative hypothermia (IPH, core body temperature < 36 °C) is a common consequence of anesthesia, which increases morbidity and potentially increases mortality [2, 3]. Studies show that if perioperative hypothermia is left untreated, it results in many adverse effects on the patient (impaired coagulation and platelet function, increased blood loss and transfusion requirements, increased oxygen consumption, and increased heart rate, blood pressure, and plasma catecholamine levels) [3, 4]. In the article by Oh et al. [1], the median (interquartile range) of core temperature was 35.7 °C (35.2–36.1 °C) at 90 min, and core temperature was less than 36 °C from the onset at 30 min after induction of anesthesia. However, an important question is raised: what were the percentages of patients with inadvertent perioperative hypothermia?

Maintaining a normothermic patient is quite challenging for clinicians during the perioperative period [3]. Hypothermia should be prevented since it causes a left shift of the oxyhemoglobin dissociation curve, thus interfering with tissue oxygen delivery [2, 3]. Hypothermia shifts oxygen–hemoglobin dissociation curve to the left, resulting in lower PaO_2 for pulse oximetry in neonates with hypoxic–ischemic encephalopathy [5]. During hypothermia, pulse oximetry 92–98% was associated with significantly lower temperature-corrected PaO_2 (51 mmHg; interquartile range, 43–51) compared with normothermia (71 mmHg; interquartile range, 61–85) [5]. Therefore, under such an inadvertent perioperative hypothermia setting, the changes in pulse oxygen saturation might not be accurate.

From the discussion above, the current study by Oh et al. did not provide convincing evidence that nasal septum pulse oximetry may be an attractive alternative to finger pulse oximetry.

Declaration

Conflict of interest The authors declare that they have no conflict of interest.

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