IN REPLY: We would like to thank the letter for their positive comments on our paper. The response to the letter gave us the opportunity to supplement methodology of the paper. We agree with the author of the letter that use of a heated circuit or heat moisture exchanger (HME) for low-flow anesthesia is not required. In low flow anesthesia, the heating and humidification effect of the anesthesia circuit is well known. Humidifying and warming effect of low flow anesthesia has been reported to be sufficient to replace the effect of HME and heating circuits at high flow anesthesia [1]. We focused on oxygen concentration during low and high flow anesthesia, therefore we used the same heating circuit and HME in both groups for variable control.

In our hospital, the ambient temperature of the operating room was maintained at 20–23°C [2]. The patients in this study were anesthetized under these room temperature conditions. If the patient's body temperature is not stable, it is natural to control the room temperature outside the range, and this did not happen in the study.

Esophageal temperature was not measured for all patients, but either the axillary or esophageal temperature may be measured depending on the situation. In this study, only the esophageal temperature was measured to minimize the deviation due to the measurement method. The esophageal temperature sensor used in this study was an Esophageal Stethoscope with Temperature Sensor 18 French (DeRoyal, USA). The temperature sensor is mounted at the depth where heart sounds are best heard using a stethoscope.

We focused on oxygen concentration during low and high flow anesthesia. Therefore, we studied patients undergoing thyroidectomy. Since temperature management was not challenging for these patients, this study could not examine the detailed effects of low-flow anesthesia on temperature management. Further research may be needed to clarify this aspect.

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CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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Conceptualization: Doosik Kim. Data curation: Hochul Lee, Sungwon Ryu. Formal analysis: Siejeong Ryu. Methodology: Jiwook Kim. Visualization: Donghee Kang. Writing - original draft: Jiwook Kim. Writing - review & editing: Donghee Kang, Siejeong Ryu. Supervision: Siejeong Ryu, Doosik Kim.

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