

LETTER TO THE EDITOR



Feasibility and Safety of Transnasal High Flow Air to Reduce Core Body Temperature

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Dear Editor,

We were most interested to read the study by Ziai et al. [1] of transnasal high flow air to reduce core body temperature in febrile neurocritical care patients. In our view, this method of treating fever warrants further investigation and we are pleased that they are planning to continue their research and wish them well with this.

Ziai et al. cite our study of nasal airflow and head cooling in brain-injured patients [2] as showing selective brain cooling and using 5–10 LPM nasal airflow. We would like to clarify that we did not show selective brain cooling (i.e., reduction in intracranial temperature below core body temperature) and that we used 12–24 LPM nasal airflow. Our subjects were all mechanically ventilated, and we chose to deliver twice their ventilated minute volume nasally. One reason was because 5–10 LPM had been tried in humans previously [3] and we were aiming to use more than this, because we did understand that evaporative cooling was related to the rate of airflow. However, we were also proceeding cautiously because one of us personally tried the airflow and found that once 30 LPM was reached the air caused stinging in the nasal mucosa. In our study, air blew directly on the nasal mucosa as it was delivered by bilateral nasal cannulae straight from the hospital compressed air supply (mean temperature 24 °C, relative humidity around 20%). Airflow via continuous positive airway pressure is arguably likely to be more comfortable and seems to have been so since one of Ziai et al.'s subjects was awake.

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References

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