Correspondence

Intramuscular ketamine for prevention of postanesthesia shivering in children

To the Editor

We have read with great interest the article by Zahra et al,[1] addressing the effect of intramuscular ketamine for prevention of postanesthesia shivering in children. As we read through the article, we feel obligated to comment on it and bring forth discrepancies to the authors' attention: 1. The authors reported that MAP, heart rate, and SpO_2 were documented in 15-minute intervals for 6 hours. Are these observations of any clinical importance on the assessment of the effects of ketamine and pethidine on postoperative shivering? It is also wearisome and exhausting for a child to have MAP, heart rate, and SpO_2 measurements taken every 15 minutes for 6 hours. 2. A comparison of ketamine and pethidine with placebo is debatable. It is our belief that enrolling children into a placebo group that actually needs treatment for shivering is also unnecessary and unethical. The similar adult version of the study performed by Kose et al,[2] did not include a control group because the authors considered it unethical. Although they mentioned their fears of their study may be considered as limited, they favored on excluding placebo group due to ethical concerns. 3. Children were transferred to the recovery room after they were fully awake. However, the recovery times of children in the ketamine and pethidine group were significantly longer than the children in placebo group. This means that the children in the ketamine and pethidine group waited in the operating room longer than children in the placebo group and were exposed to ambient temperature more. We feel that the longer recovery times caused by ketamine and pethidine administration make them less valuable choices in comparison with placebo by recovery, although the central topic of the study is postoperative shivering. A pilot study revealing this inconsistency carried out before the research would be feasible. 4. The authors allude in their article that they used a standardized anesthetic technique. Yet, there are no data on the flow rate of fresh gas and the anesthetic system used. However, these 2 points have significant effects on temperature and humidity. Flow rate of fresh gas as well as the anesthetic system used in the research needs to be clarified. Research is a necessary tool on our quest for knowledge. However, it should never undermine our ethical values. Any research that is being carried out on children needs to be handled with care and apprehension.

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Reply from the Author

We welcome the comments of Dr. Aydin and Dr. Sahin. However, we have to shortly clarify the points they raised in their correspondence. First, postoperative non-invasive hemodynamic monitoring of children receiving intramuscular ketamine or pethidine every 15 minutes for 6 hours is not uncommon practice in pediatric anesthesia, carries no harms to the patients and was used previously by many authors such as Koinig et al.[3] Secondly, in our study, anesthesia was maintained with spontaneous ventilation using Jackson-Rees modification of Ayre's T-piece circuit and humidified FGF (minimum 6L/min for all children) and was adjusted to produce normocapnia. Thirdly, Dr. Aydin and Dr. Sahin allude in their third point on the exposure time of our patients in the ketamine and pethidine groups to ambient temperature in the operating room (OR) during recovery, compared with those in the placebo group. As we have mentioned in our study, the ambient temperature was maintained at 20-22°C with constant humidity and the patients were covered all through their stay in the OR with warm sheets. Besides, there were no significant differences in tympanic temperatures among the 3 groups throughout the observation period. Moreover, no child receiving pethidine shivered. Thus, the relatively long recovery times of pethidine and ketamine groups have no implication on the (PAS). Fourthly, they mention enrolling children into a placebo group that actually needs treatment for shivering could be unnecessary and unethical, however, we clearly indicated in our article that we gave pethidine 0.3 mg/kg intravenously to all children with a PAS > grade 2.[2] We believe that grade 2 of PAS (visible tremors involving one group of

muscle) should carry no annoying effect on the child, and therefore our study did not involve any unethical research.

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Related topics

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