Research on emergence agitation in children

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To the Editor,

We commend Drs. J Chen *et al.* on their recently reported comparison of the effects of dexmedetomidine, ketamine, and placebo on emergence agitation after strabismus surgery in children.¹ This is a common problem in pediatric anesthesia that has been much studied but deserves continued research to identify strategies to decrease the incidence and to optimize treatment of this distressing side effect. While the subject area is important, we also identify several concerns regarding the study methodology. It is well established that strabismus surgery in children is complicated by a high incidence of emergence agitation (EA).² It has also been well established that propofol-based anesthetic techniques and/or techniques that include low doses of opioids or sedative hypnotics can significantly decrease the incidence of EA.³ In their study, Chen *et al.* evaluated outcomes in children undergoing eye muscle surgery who received no propofol, sedatives, or parenteral analgesics during the study period. This technique ensures a high rate of EA in the placebo group and therefore increases the statistical effect of the intervention, but it doesn't serve the study population well. Also, the technique does little to inform the discussion on EA in children. In all likelihood, there

would be a resulting benefit from any intervention providing sedation or analgesia to patients who undergo this procedure.⁴

Children undergoing general anesthesia with inhaled anesthetics have an increased risk of postanesthetic agitation compared with adults. We know that this risk is increased in certain patient populations and with certain procedures. We also know that undertreated pain contributes to EA behaviours.⁵ There are many published studies showing techniques that successfully decrease the incidence of EA in high-risk populations. We need to demand more from the next generation of protocols evaluating EA, and we ought to study patients who are receiving the best possible anesthetic for the procedure that is being performed. Only then can we investigate EA in order to identify risk factors for poor outcomes and evaluate treatments for patients who develop emergence agitation despite receiving the best possible evidence-based care.

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Editor's Note: The authors of the article: Can J Anesth 2013; 60: 385-92, respectfully declined an invitation to submit a reply to the above Letter to the Editor.

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