
Reflections on: “Is intranasal dexmedetomidine superior to oral chloral hydrate for procedural sedation in children: A systematic review”

Dear Editor,

I read the recently published systematic review article on the comparison of intranasal dexmedetomidine (IND) and oral chloral hydrate (OCH) with intense interest.^[1] I greatly appreciate Delvi MB for comparing these two methods of providing sedation for procedures in pediatric patients.^[1] I wish to present my reflections on that article^[1] and believe that it would provide a few more valuable points to the readers.

The author has analyzed a total of ten Randomized Clinical Trials (RCTs) published on this topic under two different

headings: 1. OCH and other sedatives 2. Direct comparison of OCH and IND. Although it is mentioned that a total of six RCTs were included for the direct comparison of OCH and IND, only four were included in Table 2 of that review article.^[1] Upon careful analysis of the references cited, the author has included a total of five references (References # 7–9,11,14 of the review article published^[1]) specific to this direct comparison. However, the study by Gan *et al.*^[2] (Reference # 9 of the review article^[1]) cannot be considered for the direct comparison between IND and OCH, because they have compared only two different doses of IND (1 vs

2 $\mu\text{g}\cdot\text{kg}^{-1}$) as rescue sedation following the failure of the initial OCH administration. Besides, a few RCTs were omitted, which I would like to mention here. For instance, Cao *et al.*^[3] have included 141 children aged between 6 and 36 months undergoing scheduled ophthalmic examination in their RCT and observed that IND (2 $\mu\text{g}\cdot\text{kg}^{-1}$) provided more successful sedation and better quality of ophthalmic examination when compared to OCH (80 $\text{mg}\cdot\text{kg}^{-1}$). Another study has compared the second dose of 25 $\text{mg}\cdot\text{kg}^{-1}$ of OCH with 1 and 2 $\text{mcg}\cdot\text{kg}^{-1}$ of IND as rescue sedation in 150 infants undergoing magnetic resonance imaging (MRI) after the initial administration of 50 $\text{mg}\cdot\text{kg}^{-1}$ of OCH resulting in “inadequate sedation.”^[4] Zhang *et al.*^[4] observed that IND produced better rescue sedation than OCH. I’m not sure whether any more RCTs are available on this comparison apart from these articles.

The major concern with the current systematic review article is the failure to do the “Quantitative analysis” using appropriate statistical methods of all the published RCTs on this comparison, which is considered as “gold standard” as per the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analysis) reporting system unlike in another recently published meta-analysis on this same topic.^[5] Hence, it is difficult for us to arrive at any conclusion based on this review article as few “eligible RCTs” having hundreds of subjects were not included and quantitative analysis was not performed.

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Conflicts of interest

There are no conflicts of interest.

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