

Can Dexmedetomidine be used as Sole Maintenance Anesthetic Agent at Standard Sedative Doses?

Sir,

We read the article “comparison between propofol and dexmedetomidine on depth of anesthesia: A prospective randomized trial” by Chattopadhyay *et al.*^[1] and would like to contest with the study results.

Dexmedetomidine in standard doses as used by the authors in the present study (1 µg/kg bolus, followed by 0.5 µg/kg/h infusion)

is used for conscious sedation in critical care^[2] and for endoscopic procedures.^[3] At these doses, it also reduces the requirement of concomitantly administered intravenous or inhalational anesthetic agents (AA), but does not eliminate their need.^[4,5] As quoted by authors, Ramsay and Luterma^[6] used dexmedetomidine as an AA but only when doses were increased to 5-10 mcg/kg and supplemented with local AA for skin grafting.

The methodology of present study is flawed as both propofol and dexmedetomidine were administered at fixed doses and the authors did not explain what they would do if bispectral index (BIS) value rise above the target ranges, and surprisingly not even a single patient in either of the group required supplementation with inhalational or intravenous AA to maintain BIS value in the target range. All patients received intravenous opioids and top ups of muscle relaxants along with

the infusion of either of the study drug and authors still ended up concluding dexmedetomidine as sole AA responsible for maintaining the depth of anesthesia in the dexmedetomidine group. Drugs like muscle relaxants also decrease BIS value without affecting consciousness and may mask the signs of the light plane of anesthesia when used with dexmedetomidine. It is evident that the authors were biased to prove the effectiveness of dexmedetomidine as sole AA at standard sedative doses.

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Conflict of interest

There are no conflicts of interest.

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References

1. Chattopadhyay U, Mallik S, Ghosh S, Bhattacharya S, Bisai S, Biswas H. Comparison between propofol and dexmedetomidine on depth of anesthesia: A prospective randomized trial. *J Anaesthesiol Clin Pharmacol* 2014;30:550-4.
2. Venn RM, Grounds RM. Comparison between dexmedetomidine and propofol for sedation in the intensive care unit: Patient and clinician perceptions. *Br J Anaesth* 2001;87:684-90.
3. Sethi P, Mohammed S, Bhatia PK, Gupta N. Dexmedetomidine versus midazolam for conscious sedation in endoscopic retrograde cholangiopancreatography: An open-label randomised controlled trial. *Indian J Anaesth* 2014;58:18-24.
4. Sen S, Chakraborty J, Santra S, Mukherjee P, Das B. The effect of dexmedetomidine infusion on propofol requirement for maintenance of optimum depth of anaesthesia during elective spine surgery. *Indian J Anaesth* 2013;57:358-63.
5. Piao G, Wu J. Systematic assessment of dexmedetomidine as an anesthetic agent: A meta-analysis of randomized controlled trials. *Arch Med Sci* 2014;10:19-24.
6. Ramsay MA, Luterma DL. Dexmedetomidine as a total intravenous anesthetic agent. *Anesthesiology* 2004;101:787-90.

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