Letters to the Editor

Comment on "Computed-Tomography-guided Percutaneous Bilateral Neurolytic Celiac Plexus Block with Alcohol for Upper Abdominal Visceral Cancer Pain"

To the Editor:

We thoroughly read the article by Huda F. Ghazaly et al (1), which compared the effects of dexmedetomidine as an adjunct to peribulbar anesthesia versus intravenous dexmedetomidine in strabismus surgery. The article suggested that dexmedetomidine as an adjunct to local anesthesia in strabismus surgery was more effective than intravenous dexmedetomidine. However, there were certain aspects deserved further attention.

Firstly, we had noticed that dexmedetomidine administration deviated from the standard clinical practice. In clinical settings, when administering dexmedetomidine to adults, it was typically diluted to a concentration of 4 μg/mL and a loading dose of 1 μg/kg was given over 10 minutes, followed by an adjusted maintenance dose as needed. This method ensured rapid onset (usually within 10 to 15 minutes).,The time to peak effect is 25 to 30 minutes. If no loading dose is administered, both the onset and peak times will be prolonged. Dexmedetomidine has a high clearance rate and a short elimination half-life. However, its context-sensitive half-life significantly increases, from 4 minutes after a 10-minute infusion to 250 minutes after an 8-hour infusion (2). Whereas intravenous dexmedetomidine administered over 10 minutes greatly reduces the intensity and duration of sedation. The method of drug administration in the intravenous group did not optimize the sedative effects of intravenous dexmedetomidine, which we believe has likely impacted the validity of the results.

Secondly,The most common adverse reactions of dexmedetomidine are hypotension, bradycardia, and dry mouth, etc. regarding the exclusion criteria, populations with allergic constitutions, diabetes, hypertension, hepatic or renal insufficiency, hypovolemia, and cardiovascular diseases, among others should be paid much attention to. These populations require special caution when using dexmedetomidine. So these patients might be included in the exclusion criteria.

Furthermore, the study mentioned the traditional mixture of bupivacaine and lidocaine for peribulbar block, but recent concerns about cardiac side effects associated with bupivacaine had highlighted the need for safer alternatives. Studies had shown that, in addition to having comparable anesthetic effects, ropivacaine was safer than bupivacaine in terms of cardiac toxicity and adverse neurological manifestations, and had a lower failure rate in spinal anesthesia in ophthalmic surgery. Ropivacaine in peribulbar block had been shown to produce a longer duration of sensory blockade and significantly reduce intraocular pressure (3).

Lastly, an intriguing and contentious outcome of the study pertains to the satisfaction scores, the study results showed higher scores for the dexmedetomidine peribulbar group than the intravenous group. It is noteworthy that the intravenous group exhibited more pronounced sedative effects and shorter operative times. The stable hemodynamics during surgery and the shorter operation times also suggest that the NRS scores in the intravenous group should not exceed those of the peribulbar group, contradicting the authors' conclusion and causing some confusion. We believe the authors should clarify the specific criteria for satisfaction scoring, provide additional evidence to support their viewpoint, and NRS scores during the operration should be included as an outcome measure in the future studies.

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References

1. Ghazaly HF, Hassan IE, Gabr AF, Dardeer TT, Alazhary MA. Intravenous versus peribulbar dexmedetomidine as an adjunct to local anesthetics in strabismus surgery: A randomized, double-blinded clinical trial. *Pain Physician* 2024; 27:E819-E827.
2. Li A, Yuen VM, Goulay-Dufay S, Kwok PC. Pharmacokinetics and pharmacodynamics of dexmedetomidine. *Drug Dev Ind Pharm* 2016; 42:1917-1927.
3. Samal S, Jena S, Mishra J, Nanda P, Biswal D. Evaluation of efficacy of peribulbar block with the combination of 2% lidocaine and 0.5% bupivacaine in comparison with 2% lidocaine and 0.75% ropivacaine in cataract surgery. *Natl J Maxillofac Surg* 2023; 14:300-304.