CORRESPONDENCE

Lidocaine lubricants for intubation-related complications: more details, more significance?

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To the Editor,

We read with great interest the recent systematic review and meta-analysis (SR-MA) from Liao *et al.*¹ in the *Journal*. Their report explored the potential effects of lidocaine-based lubricants to prevent postoperative sore throat (POST). Contrary to some previous reports on the topic,² the results of their study suggested that endotracheal lidocaine lubricants have no prophylactic effect on POST. Herein, we would like to raise the following comments that might explain, in part, this difference.

First, the diagnostic criteria used for POST in the various studies included by Liao *et al.*¹ is not clearly described and the reported incidence of POST is widely variable, ranging from 17.5 to 77% one hour after surgery and from 7.2 to 100% 24 hr after surgery. This high variation in the POST rate might be ascribed to differences in the individual study design or abilities of the anesthesiologists in each study, but could also be attributed to differences in diagnostic criteria for POST applied in each study. Although a four-point verbal numerical rating scale has been described for POST symptoms,³ one study used a modified four-point scale, while other studies included in the SR-MA used other criteria, including asking the patients if they had a hoarse

voice or a cough. Even in those studies that used the classical four-point score, the differences between mild, moderate, and severe sore throat might have been inconsistently assessed by the different investigators involved,⁴ thus making interpretation of the available data difficult.

Second, the inclusion and exclusion criteria in the SR-MA indicates that differences in patients' age, race, and perioperative analgesic medication used were included; however, the incidence of postoperative respiratory symptoms may differ by patient populations.^{4,5} Thus, selection bias may have lowered the methodologic quality of the SR-MA.

Third, as the dates of inclusion (1988 to 2017) in the SR-MA are wide, progress in the anesthetic techniques and equipment used as well as differences in analgesic therapies over this time frame might have influenced (i.e., lowered) the overall incidence of POST. Indeed, it is only when the sample size of the individual randomized-controlled trials (RCTs) is rigorously calculated (and sufficiently large), that the possible differences in POST rates between the intervention and control groups might be detected. Nevertheless, the study population in most of the trials included in the SR-MA are relatively small.

In summary, although the study by Liao *et al.*¹ is a useful report focusing on the prophylactic effect of lidocaine lubricants against POST, it is somewhat limited by the methodological issues mentioned above. Future work on POST should ensure the use of uniform criteria for POST assessment in high-quality adequately powered RCTs.

This letter is accompanied by a reply. Please see Can J Anesth 2020; 67: this issue.

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