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LETTER

Determining the Preventive Effect of Topical Magnesium Sulfate Administration on Postoperative Sore Throat [Letter]

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Dear editor

By performing a randomized, double-blind, non-inferiority trial in a total of 236 participants who underwent laparoscopic gynecological surgery, Wang et al[1] demonstrated that preoperative magnesium sulfate topical spraying in the oropharyngeal region was not inferior or even superior to magnesium sulfate gargling in terms of preventing the postoperative sore throat (POST) associated with tracheal intubation. However, we noted several questions that need to be addressed regarding the methodology and results of this study and would like to obtain the authors' responses.

First, a previous study by Wang et al's team involving the participants undergoing tracheal intubation with videolaryngoscopy showed that overall incidence of POST within 48 h postoperatively as the primary outcome was 20% with preoperative magnesium sulfate topical spraying.[2] When tracheal intubation was performed with direct laryngoscopy in this study under same study conditions,[1] the overall incidence of POST within 48 h postoperatively was 33.9% with preoperative magnesium sulfate topical spraying. These results indicates that intubation procedures can affect the preventive effect of preoperative magnesium sulfate topical administration on the POST. In these studies by Wang et al,[1,2] however, the readers were not provided the occurrence of poor laryngeal visualization, difficult tube advancement and multiple attempts during tracheal intubation, though they are the known risk factors of POST.[3] To identify whether the two studied interventions, magnesium sulfate topical spraying and gargling, can produce different effects on the primary outcome of this study, we believe that all of the other factors that may influence the assessment of the primary outcome must be standardized for avoidance of potential biases.

Second, POST was assessed following postoperative extubation, at 2, 6, 12, 24 and 48 hours. Wang et al[1] did not specify whether a consistent postoperative multimodal analgesia scheme was applied to all patients. Most importantly, the time relationship between assessment of POST at different time points with administration of postoperative analgesics was also unclear. In fact, the medications commonly recommended for postoperative multimodal opioid-sparing analgesia schemes in the current context of enhanced recovery after abdominal and pelvic surgery, such as corticosteroids, paracetamol, non-steroidal anti-inflammatory drugs, N-methyl-D-aspartate receptor antagonists and α_2-adrenergic receptor agonists,[4] are effective for symptom abatement and treatment of POST associated with tracheal intubation.[3] We are concerned that these unknown factors may have confused assessment of the primary outcome.

Finally, median severity score of POST assessed by an 11-point Numeric Rating Scale was only 0. This indicates that many POST symptoms are mild and clinically acceptable.[3] In the methods section, Wang et al[1] stated that the severity of POST symptoms was subdivided into four classifications (0, 1, 2 and 3) according to their characteristics. In the results, however, the authors did not provide and compare the incidences of POST with different classifications at each time point in the two groups. In fact, the protective effect of the studied interventions against moderate to severe POST symptoms is more clinically significant.[3] Unlike other work,[5] moreover, this study did not assess patient satisfaction with the studied

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interventions. Thus, we argue that the lack of these data may have devalued the level of evidence provided by Wang et al's study comparing the preventive efficacy of two studied interventions on the occurrence of POST.

Disclosure

The authors have received no financial support and no potential conflicts of interest exist.

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