



In reply: Perioperative nocturnal hypoxemia matters in surgical patients with obstructive sleep apnea

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To the Editor,

We thank Dr. Chung *et al.*¹ for their interest in our recent letter in which we had highlighted that only a small number of patients exhibit the combination of both nocturnal hypoxemia and severe obstructive sleep apnea (i.e., apnea hypopnea index > 30 events per hour).² We had suggested that these patients could be at higher risk of postoperative complications. To date, no large database has explored specifically the effect of this combination on outcomes, although Mutter *et al.* had studied the influence of obstructive sleep apnea (OSA) on outcomes,³ and Chung *et al.* had examined the influence of hypoxemia on outcomes.⁴

In our letter,² we clearly indicated the hypothesis generating nature of our work and noted that it must be confirmed in future studies. Indeed, there are some data indicating that this OSA/nocturnal hypoxemia combination could be deleterious for the patient. For example, Marrone *et al.* demonstrated in a cohort of patients (from the European Sleep Apnea Database) that the combination of severe OSA and nocturnal hypoxemia might be an important risk factor for kidney dysfunction.⁵

We have read with great interest the letter of Chung *et al.*⁶ wherein they highlighted the deleterious influence of nocturnal hypoxemia on the postoperative complication rate. Their letter confirmed to us that future studies must be specifically designed to recognize the possible influence of the nocturnal hypoxemia/severe OSA combination vs nocturnal hypoxemia alone or severe OSA alone. In

future studies, special attention should also be directed to identifying patients with this nocturnal hypoxemia/severe OSA combination in a surgical population (e.g., using screening tools such as STOP-Bang and DES-OSA).⁶

Conflicts of interest None declared.

Editorial responsibility This submission was handled by Dr. Hilary P. Grocott, Editor-in-Chief, *Canadian Journal of Anesthesia*.

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