

Negative impact of the hypopnea index or duration increase after a non-frame work surgery in patients with very severe obstructive sleep apnea

對非常嚴重的阻塞性睡眠呼吸中止症患者進行非框架手術後指數或持續時間增加的負面影響

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Abstract:

Objective: A non-framework surgery could change the postoperative components of breathing disturbances and increase the frequency or duration of hypopnea in patients with very severe obstructive sleep apnea (OSA). Either an increase of hypopnea index, which increases apnea–hypopnea index (AHI), or an increase of its duration raises the concern of worsening the oxygen desaturation and so morbidity and mortality associated with OSA. It is unclear how the oxygen saturation would change in those having increased frequency or duration of hypopneas after the surgery.

Methods: 17 patients with AHI \geq 60 events/h, having increased frequency or duration of hypopneas after the non-framework surgery.

Results: The results show that the surgery improved oxygen saturation by reducing obstructive-apnea index (36.1 events/h) and duration (8.6 s/event), despite it increased hypopnea index (16.8 events/h) and duration (9.8 s/event). The surgery improved the average of the mean oxyhemoglobin saturation of pulse oximetry (SpO₂) by 2.8% (toward a ceiling mean of 94.3%), mean minimal SpO₂ by 7.5%, and mean desaturation by 5%.

Conclusion: The results suggest sufficient apnea reduction and shift from apnea to hypopnea may mask the negative impact of the increase of hypopnea index or duration and improve postoperative mean SpO₂, minimal SpO₂, and mean desaturation.