

Effect of nasal surgery on QOL for OSAS patients

Seiichi Nakata
Fujita Health University, Japan

Effectiveness of nasal surgery on OSAS

Nasal airway patency plays a critical role in pathogenesis of obstructive sleep apnea syndrome (OSAS). Recent studies have shown that nasal obstruction is an independent risk factor for OSAS and that its surgical correction generally has a positive impact on OSAS and its related symptoms. However, the beneficial effects of nasal surgery in OSAS patients suffering from nasal obstruction have not been fully investigated. For example, Verse and Pirsig summarized the effects of nasal surgery for OSAS 1) and they found a success rate of only 17.5% for nasal surgery in 76 OSAS patients. Hence, nasal surgery is likely to decrease nasal obstruction and improve daytime sleepiness and feelings of unrefreshed sleep, but it is not efficient enough to ameliorate OSAS.

Effect of nasal obstruction and nasal surgery for QOL

Regarding the inconsistent effects of nasal surgery on OSAS, a possibility that the direct benefits of nasal surgery is believed to be limited. However, It was found that nasal surgery ameliorated sleep apnea reflected with the improved nocturnal oxygenation/sleep quality and the shortened apnea duration²⁾. Udaka et al. analyzed the relationship between daytime sleepiness and nasal obstruction with a large questionnaire survey in a working population³⁾. They revealed that the 7180 employees in post offices with complaints of severe nasal obstruction experienced the symptom of a excessive daytime sleepiness, suggesting that chronic nasal obstruction should impair their quality of daily life. Moreover, in many studies, the close cause–result relationship between daytime sleepiness and an occurrence of severe allergic rhinitis have been clarified⁴⁾⁻⁵⁾. Also, it was reported that rhinitis with symptomatic nasal obstruction was very often associated with increased systolic blood pressure and it may be a risk for hypertension⁶⁾. Regarding the impact of nasal surgery on subjective symptoms and severity of obstructive events in OSAS, Se'rie's's et al. also reported that the major effect of nasal surgery was symptom relief, without lowering the occurrence of obstructive events⁷⁾. Concerning an arousal, a study reported that frequent arousals due to evaluated upper airway resistance and subsequent disrupted sleep architecture might be responsible for daytime hypersomnolence in OSAS⁸⁾. All of these studies suggested that the disrupted sleep due to easy arousability, which could be predisposed by the elevated upper airway and nasal resistance, is one of the important factors that explains the mechanism of a positive impact of nasal surgery on sleep quality and daytime sleepiness in patients with OSAS. Although the pathogenesis to link a nasal airway patency to sleep quality has been mostly unknown to date, the mechanoreceptors located in the nasal cavity should control the afferent/efferent stimuli from the nose to brain and vice versa.

seisay@fujita-hu.ac.jp