

Title: Postoperative Myofunctional Therapy Enhances Surgical Outcomes in Patients with Obstructive Sleep Apnea: A Prospective Comparative Study

Lok-Yee Joyce Li MD ¹ and Cheng-Jung Wu MD PhD^{2,3,*}

¹ Department of Environmental and Occupational Medicine, National Taiwan University Hospital Hsin-Chu Branch, Hsinchu, Taiwan

² Department of Otolaryngology, Shuang Ho Hospital, Taipei Medical University, Taipei, Taiwan

³ Allergy and Rhinology, Quality HealthCare Center, Taoyuan, Taiwan

Objective : Obstructive sleep apnea (OSA) is a common condition characterized by repeated collapse of the upper airway during sleep at night. This airway blockage leads to drops in blood oxygen levels and fragmented sleep. Continuous positive airway pressure (CPAP) is the first-line treatment for OSA, but in Taiwan, patients often have poor adherence to CPAP, which limits its effectiveness. Surgery is another treatment option for OSA, but its success varies from person to person and the stability of surgical outcomes is not great. Myofunctional therapy (MFT) uses specific oropharyngeal exercises to improve OSA, and is now considered a promising adjunct treatment that can help improve surgical results. This study aims to prospectively compare the surgical outcomes of OSA patients who undergo surgery plus postoperative MFT (OP+MFT) with those who only have surgery (OP).

Methods : This study is a single medical center, prospective comparative study, with participants being adults with moderate to severe OSA (apnea-hypopnea index [AHI] ≥ 15 events/hour). After surgery, patients were non-randomly assigned to either the surgery with MFT group (OP+MFT) or the surgery-only group (OP). The OP+MFT group started a 12-week MFT program in the fourth week after surgery. All patients underwent Polysomnography (PSG) at the hospital sleep center before surgery (baseline) and again at 3 months and 12 months post-surgery.

Results : Three months after surgery, compared to the OP group, the OP+MFT group showed significantly better improvements in AHI, increased lowest oxygen saturation (LSaO₂), and reduced snoring index. At the 12-month follow-up, the OP+MFT group still had a notably greater improvement in LSaO₂; however, by 12 months post-surgery, the differences between the two groups in AHI and snoring index improvements were no longer statistically significant.

Conclusion : Postoperative MFT is a safe and effective supportive treatment for OSA surgery. It can improve related sleep parameters, and its benefits are most noticeable at the 3-month follow-up after surgery.

中文題目：睡眠手術術後肌功能訓練提升阻塞型睡眠呼吸中止症患者之手術療效：一項前瞻性比較研究

作者：李樂怡，巫承融*

服務單位：臺北醫學大學部立雙和醫院