

中文題目：

上下顎前移術治療阻塞性睡眠呼吸中止症後之舌相關顱測分析

Tongue-related Cephalometry of Obstructive Sleep Apneics after Maxillomandibular Advancement

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Objective: Maxillomandibular advancement surgery (MMA) is a well-established treatment of obstructive sleep apnea (OSA). There is limited literature correlating tongue-related anatomical changes following maxillomandibular advancement surgery. This retrospective study aimed to evaluate the changes of tongue-related cephalometric parameters in patients with OSA after MMA.

Materials and Methods: Ninety-one OSA (20 females) patients after MMA were included in this study. Demographics including gender, age, and BMI were collected. Twenty pairs of cephalometric measurements, before and within one month after surgery, were taken using picture archiving and communication system (PACS). Grouping by gender and BMI was applied to evaluate the difference in cephalometric parameters. Statistical differences of intra- and intergroup were assessed by paired and independent t tests ($P < 0.05$), respectively.

Results: The average age at surgery was 33.4 (25~62) years, and the BMI was 23.2 (16.7-30.8) kg/m². Apnea-hypopnea index was improved from 39.6±24.7 to 4.0±7.0/hr. After surgery, significant improvements were found in most parameters including larger size of the pharyngeal airway space behind soft palate (5.8±2.3 to 10.9±3.2mm) and tongue base (8.5±3.4 to 14.8±3.9mm), shorter pharyngeal airway length (76.2±7.6 to 70.0±6.7mm), shorter distance between hyoid bone to mandibular plane, and larger angle of the hyoid plane with the tongue tip. When stratified by gender and BMI, the angle between the hyoid plane and the tongue in female, and the mandibular plane angle in male patients did not have significant improvement; the distance between hyoid bone

to mandibular plane did not improved significantly in patients with BMI less than 23 kg/m².

Conclusion:

This study demonstrates the alterations tongue-related cephalometric changes among patients with OSA submitted to MMA. Patients who underwent MMA showed a significant improvement in most parameters. The differences between genders, and patients of different BMI were also elucidated.