



## New Suspension Sutures for Retropalatal Obstructive Sleep Apnea

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### Abstract

Retropalatal region is considered the most common site of obstruction in obstructive sleep apnea (OSA) [1]. At our institution (as other modern surgeons of obstructive sleep apnea), we believe in and follow the concept of obtaining expansion and stabilization of the collapsible pharyngeal tissues instead of removal of such tissue via implementation of tissue-preservation, non-ablative techniques and we consider this as the recent evolution in surgical treatment of OSA.

**Keywords:** Retropalatal Region; Obstructive Sleep Apnea (OSA)

### Introduction

Pang and Woodson at 2007 presented the expansion sphincter pharyngoplasty [1] but the procedure necessitates dissection and relocation of the separated mucosa deprived muscles that not devoid of mucosa disturbance and muscle tear, weakness and/or fibrosis.

At 2016, El-Ahl and El-Anwar described a new simple palatal suspension suture (SS) technique that could achieve rapid and effective expansion pharyngoplasty without dissection or mucosa interruption. More recently, double SS technique was reported and ensured expansion and stabilization of both retropalatal and interpillar areas [2,3]. SS is simple, rapid and reversible with good surgical results and minimal comorbidities.

SS is a minimally invasive, tissue-preserving non-ablative maneuver aiming at lateralization and anteriorly advancement of the collapsible lateral pharyngeal walls and soft palate via bilateral pulling and suspension of both palatopharyngeus muscles to the pterygoid hamulus and pterygomandibular raphe. The tonsillar beds and the superior constrictor muscle of the pharynx were not

violated. The procedure respects and preserves the anatomic and physiologic components of the velopharyngeal sphincter by preservation of the mucosal arches, uvula and palatal muscles. Hence, the physiologic functions of the soft palate (speech and deglutition) were not jeopardized.

### Conclusion

The procedure is less costly; it was performed within a relatively short time and no special type of sutures or instrumentation was required. Moreover, SS as mucosa preserved procedure without palatal dissection or removal minimizes postoperative edema with easy recovery and almost no need for ICU admission.

SS could be easily combined with other maneuvers in single stage multilevel intervention for OSA (e.g. modified anterior palatoplasty and hyoid surgery) within a reasonable time, which is important for those patients [4,5].

The authors might encourage more orientation and training for the easily applicable SS as a forward step in the way to reach the optimum treatment for OSA.

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