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Are Drug-Induced Sedation Endoscopy–Based Predictors Better Predictors of Uvulopalatopharyngoplasty Outcomes?

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We read with great interest the meta-analysis presented by Choi et al.[1] We congratulate the authors for the robust statistical approach undertaken in the meta-analysis. Our interest in this article relates to the predictor selection process. Our letter focuses on 4 questions.

First, is visualization of palatal obstruction during drug-induced sedation endoscopy (DISE) a better visual predictor?[2] The Friedman staging system is usually used for upper airway analysis during the wake state. It has been shown that upper airway assessment during the sedated sleep state is significantly different from the awake state.[3] Hence, this makes us postulate that visualizing palatal obstruction during sedated sleep will be a better predictor than that during the wake state.

Second, is obstruction in obstructive sleep apnea predominantly a multisegmental obstruction as compared with a single-site obstruction?[4] This meta-analysis excludes studies where other surgical procedures were performed simultaneously with uvulopalatopharyngoplasty (UPPP). This raises 2 critical comments. First, if obstruction is multisegmental, it will be easier in clinical practice to carry out a multisegmental surgical procedure.[3] Second, UPPP-only treatment will most likely lead to no long-term improvement if obstruction is truly multisegmental.

Third, is a DISE classification system (ie, VOTE classification system) a better classification system for predicting outcomes for UPPP?[5] We hypothesize that a DISE classification system will more likely successfully predict UPPP outcomes because such a grading system scores a more representative form of obstruction during sleep. Hence, the VOTE classification system will be a better framework than the Friedman staging system. We acknowledge that choosing the right DISE classification system is challenging due to multiplicity of DISE classification systems.[5]

Fourth, does dynamic assessment of obstruction in obstructive sleep apnea provide better predictor features for UPPP as compared with static assessment? DISE provides 3-dimensional multisegmental visualization of obstruction during sleep.[2] It provides more useful information on palatal obstruction in terms of its obstruction configuration and severity. This is not possible during a relatively static awake assessment.

In conclusion, we applaud the authors for attempting to answer a very complex question: What is the best predictor for UPPP outcomes?

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References

1. Choi JH, Cho SH, Kim S-N, Suh JD, Cho JH. Predicting outcomes after uvulopalatopharyngoplasty for adult obstructive sleep apnea: a meta-analysis. *Otolaryngol Neck Surg*. 2016;155:904-913.
2. Croft CB, Pringle M. Sleep nasendoscopy: a technique of assessment in snoring and obstructive sleep apnoea. *Clin Otolaryngol Allied Sci*. 1991;16:504-509.
3. De Vito A, Agnoletti V, Zani G, et al. The importance of drug-induced sedation endoscopy (DISE) techniques in surgical decision making: conventional versus target controlled infusion techniques—a prospective randomized controlled study and a retrospective surgical outcomes analysis. *Eur Arch Otorhinolaryngol*. 2017;274:2307-2317.
4. Kotecha BT, Hannan SA, Khalil HMB, Georgalas C, Bailey P. Sleep nasendoscopy: a 10-year retrospective audit study. *Eur Arch Otorhinolaryngol*. 2007;264:1361-1367.
5. De Vito A, Carrasco Llatas M, Vanni A, et al. European position paper on drug-induced sedation endoscopy (DISE). *Sleep Breath*. 2014;18:453-465.