THE MORPHOLOGY OF NASOPHARYNGEAL INLET IN OBSTRUCTIVE SLEEP APNEA

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OBJECTIVES: Routine flexible optic laryngoscopy (FOL) displays obstructive sleep apnea (OSA) related airway passages from nasopharynx to hypopharynx. Tip of the flexible endoscopezewing at the nasopharyngeal inlet allows us to visualize the morphology of this area. We wanted to evaluate the impact of nasopharyngeal inlet (NPI) morphology on OSA severity.

METHODS: The videos obtained during FOL examinations of NPI were examined in 83 patients (55 male, 28 female). Two main morphologies, wide and narrow were depicted. Narrow NPI group was further divided into 3 groups: circumferential, elliptical and horizontal respectively. Wide NPI group was divided into circumferential and kidney-shaped respectively.

RESULTS: There were 72 (86.74%) male and 11 (13.25%) female. The mean age was 42.14 ± 45.32 years. The mean apnea hypopnea index (AHI) in narrow NPI group was 23.74 ± 10.8 and in wide NPI group was 17.38 ± 12.9. The wide NPI group had lower RDI levels compared to narrow morphology groups (p<0.0005) (Table 1).

CONCLUSION: Morphology of nasopharyngeal inlet may predict evidence OSA during routine FOL examinations. Further analysis of the subgroups may show the types of morphologies prone to collapse and benefit from surgery.

DISCUSSION: Previous methods of airway classification have included the Friedman and Fujita’s classification methods. Kissmeyer-Nielson et al: 2007 study classified and studied of Woodson emphasis importance the collapsibility center of the upper airway. A major shortcoming of both Fujita’s and Friedman’s methods is that they do not describe the airway structure. Quantification of RPSA compliments Friedman’s missing oropharyngeal finding about soft palate from supero-inferior perspective through FOL. Describing NPI morphology was to show the types of morphologies prone to collapse and benefit from surgery. It is widely accepted that the retropalatal airway is smaller in OSA patients than in normal patients. Woodson recently presented data emphasizing importance of palate being one of the major contributer to OSA.

REFERENCES.