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Original Research Article

ELSOBKI STAGING SYSTEM: LEVEL SPECIFIC CLASSIFICATION OF THE LATERAL PHARYNGEAL WALL COLLAPSE IN OSA PATIENTS

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Abstract: Lateral pharyngeal wall collapse and splinting possibilities is still an incompletely answered question in sleep surgery. Sixty three percent of our revision cases in the last six years was due to failure to properly splint the collapsing lateral pharyngeal walls specially at the hypopharyngeal level. To improve our outcome we thought about level specific staging system of the lateral pharyngeal walls in OSA patients

Key words: Pharyngeal, hypopharyngeal, Nosocomial etc.

Introduction: The pharyngeal airway collapses when inspiratory transpharyngeal pressure exceeds the action of pharyngeal dilator muscles ***(Li and Lee 2012).*** Upper airway collapse occurs in four levels; soft palate, tongue, lateral pharyngeal walls (li and lee 2012) and larynx ***(Viccini et al., 2012).***

Our clinical diagnostic approach to OSA patients: All patients undergo full ENT examination focusing on soft palate anatomy, tonsil grading and tongue volume. Then fiberoptic nasoendoscopy is performed with muller maneuver. Patients who are surgical candidates undergo DISE. We always use propofol as the sedating agent by the bolus method of infusion.

Our staging system: Based on data gained from DISE, we classified lateral pharyngeal wall collapse into lateral pharyngeal wall collapse at the level of salpingeopharyngeal folds (LS) figure 1, lateral pharyngeal wall collapse at the level of the velum (LV) figure 2 and lateral pharyngeal wall collapse at the hypopharyngeal level (LH) figure 3. Combination of 2 or three levels may occur (LSV) (LVH) (LSVH). LS means that the collapse occurs at the level of the folds while the velum is patent, although we have seen only few cases with this pattern of collapse; it is essential to identify this rare pattern of collapse to avoid unnecessary palatal surgery while just fold reduction can sufficiently help the patient. LV means lateral wall collapse at the level of

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the velar segment of the soft palate not caused by hypertrophic folds; any tonsillar level collapse is also classified as LV. LH means collapse of the lateral pharyngeal wall distal to the tonsils sometimes causing 2ry epiglottic collapse by pushing the epiglottis from side to side.

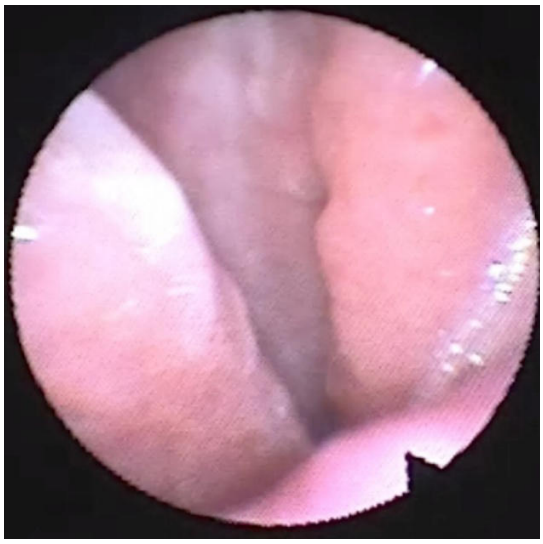

Fig. (1): LS

Fig. (2): LV

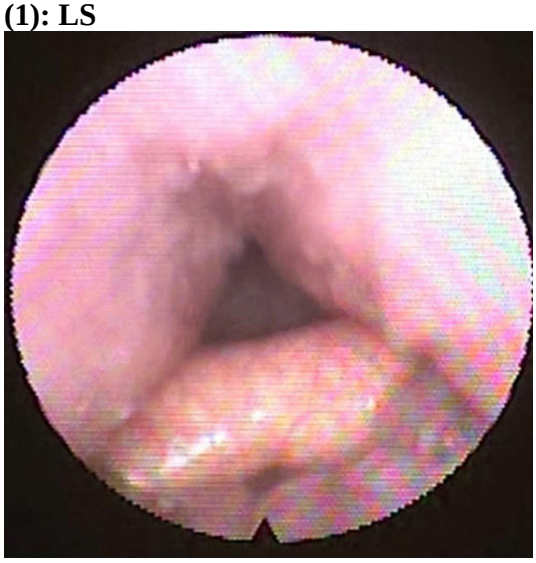

Fig. (3): LH

Discussion: Proper lateral wall splinting is still one of the limitations in sleep surgery. Better outcome usually starts with accurate evaluation. In our view it is unjustice to describe the lateral pharyngeal as collapsing or not or even as partial or complete collapse. Lateral wall collapse should be thoroughly evaluated, segmentally classified and accordingly managed. Lateral pharyngeal wall does not collapse as one unit, so it can't be managed in the same way. Many clinical diagnostic classifications for OSA patients are reported in literature by several authors like ***(Fujita, 1993; Sher, 2002; Friedman et al., 2002 and Kezirian et al., 2011)***. To our knowledge, our staging system is the first to segmentally evaluate the lateral pharyngeal wall in a separate manner and deal with it as a separate level of collapse.

Conclusion: Our staging system is an easy and accurate method to evaluate lateral pharyngeal wall collapse in OSA patients. It must be part of surgical decision making to improve outcome.

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