

## Letter to the Editor

# In Response to Assessment of Laryngopharyngeal Reflux and Obstructive Sleep Apnea: A Population-Based Study

**Key Words:** apnea, head neck surgery, laryngopharyngeal, otolaryngology, reflux, sleep.

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Dear Editor,

We carefully read the paper entitled “Assessment of Laryngopharyngeal Reflux and Obstructive Sleep Apnea: A Population-Based Study”.<sup>1</sup> Authors explored the prevalence of laryngopharyngeal reflux (LPR) in obstructive sleep apnea (OSA) patients considering LPR when reflux symptom index (RSI) was higher than 13. They reported a prevalence of LPR in 45.4% of OSA individuals, while LPR (RSI > 13) was associated with smoking and age. We congratulate the authors on this large cohort study. The association between LPR and OSA is an important unresolved topic that needs adequate methodological investigations. In that way, we would like to draw attention to some points.

First, it is commonly accepted that LPR is associated with non-specific symptoms (e.g., globus sensation, throat clearing, sticky mucus, dysphagia), which are included in RSI.<sup>2</sup> These symptoms may be nevertheless encountered in many prevalent otolaryngological conditions, i.e. allergy,<sup>3</sup> rhinitis,<sup>3</sup> rhinosinusitis<sup>4,5</sup> or tobacco-induced laryngopharyngitis.<sup>6</sup> The use of RSI > 13 as an LPR detection tool is therefore insufficient and sometimes misleading; RSI score being positive/elevated in smokers,<sup>6</sup> or in patients with rhinitis or rhinosinusitis.<sup>4,5</sup> Moreover, some anatomical features of OSA patients may be associated with throat symptoms irrespective of the presence of LPR, including globus sensation or dysphagia related to tongue base hypertrophy or contact between epiglottis and pharyngeal wall.<sup>7</sup>

Second, the authors reported a significant association between LPR (RSI) and smoking.<sup>1</sup> Before reaching conclusion, it is important to remember that smoking alone may lead to chronic laryngopharyngitis, reflecting on positive reflux finding score and RSI, irrespective of the presence of LPR.<sup>6</sup> Considering these confounding factors, it becomes difficult to state that LPR is associated with tobacco according to RSI.

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The lack of objective diagnostic approach to confirm the proportion of LPR in the OSA population is an important limitation regarding the non-specificity of symptoms and the confounding factors that were not evaluated in the study.

The best way to investigate the prevalence and association of LPR and OSA remains the realization of concomitant polysomnography and hypopharyngeal-esophageal pH monitoring, both being the most specific diagnostic tools to confirm OSA and LPR. From these findings, the authors might assess the association between both conditions and explore the potential LPR findings that may increase OSA severity, such as tongue tonsil hypertrophy or edema of uvula. This approach needs adequate reflux finding score considering laryngeal and extra-laryngeal signs, both types of signs being prevalent in LPR and OSA patients.<sup>8,9</sup>

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