Aerophagia May Not Cause Gastroesophageal Reflux

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With interest we read the findings of Shepherd et al.,¹ "Symptoms of Aerophagia are Common in Patients on Continuous Positive Airway Pressure Therapy and are Related to the Presence of Nighttime Gastroesophageal Reflux." Shepherd et al. examined the prevalence of continuous positive airway pressure (CPAP)-associated aerophagia utilizing patient questionnaires to identify symptoms of gastroesophageal reflux (GER) and aerophagia in CPAP users. One of the authors' conclusions is that the presence of aerophagia symptoms is the strongest predictor of GER symptoms and vice versa. Authors further conclude that aerophagia induced by CPAP may precipitate GER. However, we feel that the authors failed to discuss prior data suggesting evidence to the contrary. The study by Bredenoord et al.² is especially important as it sheds more light on the connection between aerophagia and GER.

In Bredenoord's study, esophageal impedance, pH, and pressure were monitored in patients with and without gastroesophageal reflux disease (GERD) before and after inflation of air into the gastric cavity, an experimental surrogate for physiologic aerophagia. Air infusion increased the incidence of gas reflux; however there was no increase in acid reflux episodes. These findings are supported by Sifrim et al., who also concluded that the liquid component of GER occurred as a primary event and not associated with gas.³ In light of this contradictory evidence, we should be cautious to assume that aerophagia precipitates GER, and in fact the opposite may be true.

Furthermore, in data sub-analysis by Shepherd et al., patients with preexisting GER showed no more aerophagia after CPAP than non-GER patients. This finding is also at odds with Bredenoord et al.,² who reported that in patients with GERD, the rate of belching is 60% higher than healthy subjects. GERD patients may be more prone to belching due to increased air swallows,² baseline deficiency in lower esophageal sphincter (LES) tone, or increased rate of transient LES relaxation.⁴ The lack of aerophagia in GERD patients after CPAP raises the question,

does CPAP actually improve baseline aerophagia in GERD patients?

Given conflicting evidence in the literature regarding the relationship between GER, aerophagia, and CPAP, it may be premature to assume causality among these entities. The directionality of this link has consequences in the way we approach and treat CPAP users with symptoms of aerophagia.

CITATION

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