

# Reflux esophagitis is one of highly prevalent comorbidities among patients with chronic obstructive pulmonary disease

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Patients with chronic obstructive pulmonary disease (COPD) are usually elderly and have a history of tobacco exposure. COPD is therefore a complex disease linked to comorbidities that influence both treatment efficacy and outcomes [1]. These comorbidities not only affect a COPD patient's symptom burden, functional performance, and health status, but also increase his or her risk of hospitalization and mortality [2,3]. Almost all COPD patients have at least one comorbidity, and 53.5% have four or more comorbidities [4]. It has been suggested that a comorbidity should fulfill at least one of the following criteria: 1) mutual impact of one disease on the outcome of the other, 2) the frequency of the disease and its impact on mortality are greater than that of the general population, or 3) the disease is part of a unique COPD phenotype [1].

Researchers using many different methods to identify patients with gastroesophageal reflux disease (GERD), including validated questionnaires, esophageal pH monitors, and medical claims data, have consistently found a higher prevalence of GERD among COPD patients than the general population [1]. When medical claims data

are used to identify patients, the prevalence of GERD in Korean COPD patients is 28% [5].

Almost all COPD outcomes are impacted by coexistent GERD, including a decrease in health-related quality of life and an increase in severe symptoms [6]. In a cross-sectional analysis of administrative databases, increased COPD exacerbations were reported in patients with coexistent GERD with an odds ratio of 1.5 (95% confidence interval, 1.5 to 1.6) [5]. Although one small clinical trial showed a 77% reduction in COPD exacerbations with the use of a proton-pump inhibitor [7], specific therapeutic recommendations for GERD in COPD patients are not available.

This issue of *The Korean Journal of Internal Medicine* contains a study of reflux esophagitis (RE) confirmed by esophagogastroduodenoscopy (EGD) in COPD patients. The prevalence of RE in Korean COPD patients is 30%, higher than previously reported in the Korean general population [8]. As the authors discuss, this discrepancy may be due to the presence of RE symptoms, which are not relevant to COPD. However, the exceedingly high prevalence of EGD-confirmed RE in this study's COPD patients should not be ignored. Interestingly, the authors found that inhaled anticholin-

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ergics were associated with a decreased risk of RE. This finding is concordant with a cross-sectional analysis of administrative databases [5], which also reported decreased GERD with anticholinergic use.

The effect of anticholinergics on RE should be evaluated with well-designed studies, since GERD was more frequently identified in COPD patients with predominantly bronchitis phenotypes (33.6% compared to 27.6% in those without chronic bronchitis) [9], and anticholinergics decrease sputum volume and are frequently used as mucoregulators [10]. Additionally, since 13.3% of COPD patients have a hiatal hernia on chest computed tomography [11], there is renewed attention to the role of mechanical factors such as persistent cough and/or changes in thoracic and abdominal pressures in the development of hiatal hernias and as a potential explanation for the association between COPD and GERD [1].

In summary, RE is common in COPD patients although it is not necessarily associated with significant symptoms. Sophisticated studies of the developmental mechanism and treatment of RE in COPD patients are warranted to provide specific therapeutic recommendations.

### Conflict of interest

No potential conflict of interest relevant to this article was reported.

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