

Chronic Proton Pump Inhibitor Use Associated With Increased Exacerbations in Biologic-Treated Asthma

GLENVIEW, IL – Chronic proton pump inhibitor (PPI) use was associated with increased asthma exacerbations, systemic corticosteroid use, respiratory infections, and health care utilization among patients with difficult-to-treat asthma receiving biologic therapy in a study being presented at the CHEST 2026 Annual Meeting in Phoenix, Arizona, October 18-21.

In a retrospective propensity score-matched cohort study Researchers conducted a using the TriNetX US Collaborative Network, which includes 65 health care organizations. The study included adults with asthma treated between 2014 and 2025 with biologic agents. Patients with established ulcer-related indications were excluded to isolate empiric PPI use. PPI users were compared with nonusers, and outcomes were assessed from 1 to 365 days after the index prescription.

PPIs have demonstrated modest benefit in a small subset of patients with asthma, particularly those with nocturnal symptoms and coexisting reflux. However, increasing evidence links long-term PPI exposure to infectious and systemic adverse events. The research evaluated the safety of chronic PPI use among patients with difficult-to-treat asthma receiving biologic therapy without established ulcer-related indications.

After propensity matching, 1,228 patients remained in each cohort, with well-balanced baseline characteristics. During 1 year of follow-up, chronic PPI use was associated with significantly higher rates of asthma exacerbations (31.9% vs 22.6%; OR, 1.60), rescue systemic corticosteroid use (72% vs 40%; OR, 3.88), respiratory infections (8.4% vs 2.3%; OR, 3.83), ICU admissions (4.3% vs 1.2%; OR, 3.65), and emergency visits (15.6% vs 8.4%; OR, 2.00). All-cause mortality did not differ significantly between the groups.

“Clinicians should carefully reassess the necessity of chronic PPI therapy in biologic-treated asthma patients without clear ulcer-related indications,” said Joshua Le, MD, a CHEST 2026 presenting author. “Chronic PPI use frequently persists as an act of omission, with therapy continued beyond its initial short-term indication despite resolution of symptoms or lack of objective need. Proactive medication reconciliation, clear documentation of indication, and structured deprescribing strategies may reduce unnecessary long-term exposure and help mitigate preventable morbidity in this vulnerable population.”

The findings suggest that long-term acid suppression may represent a modifiable risk factor in biologic-treated patients with difficult-to-treat asthma. Researchers noted that

the association may be mediated by microbiome alteration and increased susceptibility to respiratory pathogens.

Further results will be presented at the CHEST Annual Meeting 2026 as part of the Asthma in Minutes: From Evidence to Action rapid fire original investigation presentations titled, *Empiric Chronic Proton Pump Inhibitor Use is Associated With Increased Exacerbations in Biologic-Treated Difficult-to-Treat Asthma: A Propensity-Matched US Cohort Study*. The [study abstract](#) can be viewed on the CHEST® journal website.