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Risk of Cardiovascular and Cerebrovascular Events in COPD Patients Treated With Long-Acting β_2 -Agonist Combined With a Long-Acting Muscarinic or Inhaled Corticosteroid

SAGE Recommends

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Background: The recent approval of several fixed-dose combination long-acting β_2 -agonist (LABA) and long-acting muscarinic antagonist (LAMA) products has increased the use of dual bronchodilators in the treatment of chronic obstructive pulmonary disease (COPD). Understanding the comparative safety of this combination is important for informing treatment decisions. **Objective:** To compare the risk of cardiovascular and cerebrovascular (CCV) events associated with LABA/LAMA compared with a combination of LABA and inhaled corticosteroid (ICS). **Methods:** This was a retrospective, observational cohort study using health insurance claims data to identify COPD patients initiating LABA/LAMA or LABA/ICS. CCV outcomes included hospitalizations with a primary diagnosis for acute coronary syndrome, heart failure, cardiac dysrhythmia, stroke, or transient ischemic attack. Patients were followed until they experienced an event, discontinued treatment, initiated medication from the opposite cohort, or lost enrollment. Patients were matched 1:4 on propensity scores, and time to event was compared using Cox proportional hazards models. **Results:** After matching, there were 3842 patients in the LABA/LAMA cohort and 15 225 in the LABA/ICS cohort. Cardiovascular events in the LABA/LAMA cohort were lower than in the LABA/ICS: hazard ratio (HR) = 0.794; 95% CI = 0.623-0.997. No significant difference in the risk of cerebrovascular events (HR = 1.166; 95% CI = 0.653-1.959) was observed. **Conclusions:** Despite concerns about the CCV effects of LAMA and LABA monotherapy, the LABA/LAMA combination had similar or lower risk of these events in comparison to LABA/ICS. Further studies are recommended to confirm these findings.



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