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Original Research: COPD | November 2015

Discontinuation of Inhaled Corticosteroids in COPD and the Risk Reduction of Pneumonia

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Abstract

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BACKGROUND: The widespread use of inhaled corticosteroids (ICSs) for COPD treatment has been questioned. Recent studies of weaning some patients with COPD off ICSs found little or no adverse consequences compared with long-acting bronchodilators. It is unclear, however, whether discontinuation of ICSs reduces the elevated risk of pneumonia associated with these drugs.

METHODS: Using the Quebec health insurance databases, we formed a new-user cohort of patients with COPD treated with ICSs during 1990 to 2005 and followed through 2007 or until a serious pneumonia event, defined as a first hospitalization for or death from pneumonia. A nested case-control analysis of the cohort was used to estimate the rate ratio of serious pneumonia associated with discontinuation of ICS use compared with continued use, adjusted for age, sex,

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respiratory disease severity, and comorbidity.

RESULTS: The cohort included 103,386 users of ICSs, of whom 14,020 had a serious pneumonia event during 4.9 years of follow-up (incidence rate, 2.8/100/y). Discontinuation of ICSs was associated with a 37% decrease in the rate of serious pneumonia (rate ratio [RR], 0.63; 95% CI, 0.60-0.66). The risk reduction was rapidly evident, going from 20% in the first month to 50% by the fourth month after discontinuation. The risk reduction was particularly marked with fluticasone (RR, 0.58; 95% CI, 0.54-0.61) but less so with budesonide (RR, 0.87; 95% CI, 0.78-0.97).

CONCLUSIONS: Discontinuation of ICS use in COPD is associated with a reduction in the elevated risk of serious pneumonia, particularly so with fluticasone.

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