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Prevention

STATIN USE AT TIME OF RESPIRATORY VIRAL INFECTION IN PATIENTS WITH PRIOR HISTORY OF CARDIOVASCULAR DISEASE AND RISK OF SUBSEQUENT CARDIOVASCULAR EVENTS

Poster Contributions
Poster Hall B1
Sunday, March 15, 2015, 9:45 a.m.-10:30 a.m.

Session Title: Statins, Cholesterol Guidelines and Lifestyle
Abstract Category: 21. Prevention: Clinical
Presentation Number: 1178-112

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Background: A recent investigation identified a 40% decrease in all-cause mortality in patients admitted with respiratory viral infections (RVI) who received statin therapy. The purpose of this study was to determine the risk of subsequent cardiovascular (CV) events in inpatient subjects with confirmed RVI with history of CV disease.

Methods: We studied Intermountain Healthcare inpatients with a history of CV disease that tested positive for RVI from Jan 1, 2007 to Dec 31, 2013 (n=3439). Molecular polymerase chain reaction (PCR) or direct immunofluorescence assay (DFA) positive for influenza A (seasonal or H1N1) or B, human metapneumovirus, parainfluenza, adenovirus, rhinovirus, respiratory syncytial virus, and/or coronavirus defined RVI. The subjects were followed for 90 days to determine subsequent CV events (including CV death, myocardial infarction [MI], and stroke). Multivariable logistic regression was used to examine association with medication use (statins, antivirals, steroids) and the combined outcome of any subsequent CV event.

Results: A total of 30 (3.0%), 430 (42.3%) and 413 (40.6%) received statins, antivirals and corticosteroid, respectively. Only 126 (3.7%) of the subjects had a subsequent CV event. The majority of the events were CV death (n=70, 56%), followed by non-fatal strokes (n=33, 26%) and non-fatal MI (n=24, 19%). After adjusting for age, sex, Intermountain mortality risk score, presence of pneumonia, tobacco use, heart rate, respiratory rate, and body mass index , statin use was associated with increase in subsequent CV events (OR= 2.66, 95%CI 1.83, 3.87; p<0.0001). However, antivirals (OR=1.09; 95%CI: 0.75, 1.60; p=0.65) and corticosteroids (OR=0.80; 95%CI 0.54, 1.18; p=0.25) were not associate with CV events.

Conclusion: Among patients with history of CV disease, we found an increased risk of subsequent CV events in patients receiving statins at time of the admission for RVI. Use of a statin may be a surrogate for the severity of the prior CV disease.