

Antibiotic therapy appears beneficial for patients with COPD

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Extended use of a common antibiotic may prolong the time between hospitalizations for patients suffering from chronic obstructive pulmonary disease (COPD), according to a post-hoc analysis of a multicenter study which compared the hospitalization rates of patients treated with a 12-month course of azithromycin to the rates of those treated with placebo.

The results of the current analysis will be presented at the ATS 2013 International Conference.

"Preventing respiratory-related re-hospitalizations is a key component of COPD therapy, and previous research has shown that a 12-month course of azithromycin decreases the risk of acute exacerbations of COPD," said lead author Fernando Martinez, MD, MS, director of pulmonary diagnostic services at the University of Michigan Health System. "COPD patients who have been hospitalized for a respiratory event are at particularly high risk for re-hospitalization, and we wanted to examine whether chronic azithromycin therapy might provide a benefit in these patients."

For their study, the researchers used clinical data gathered from a previous study of azithromycin use conducted by the COPD Clinical Research Network (CCRN), a group of research centers established to study new treatments for COPD and funded by the National Heart, Lung, and Blood Institute (NHLBI). All patients who participated in the study either had experienced an acute exacerbation of COPD in the 12

months prior to study enrollment or had used [supplemental oxygen](#) at the time of enrollment. Patients were randomized to receive either a daily dose of 250 mg of azithromycin or placebo for one year. In response to a recent FDA report suggesting a link between azithromycin and cardiovascular events, Dr. Martinez emphasized that the study excluded individuals with a heart condition known as prolonged QTc and those at risk for the condition.

The researchers noted the time any patient had an initial respiratory-related hospitalization and then measured the time that elapsed before the same patient was re-hospitalized, keeping track of the total number of hospitalizations as well as those that were due to respiratory-related causes such as pneumonia, influenza, bronchitis, asthma or [acute exacerbation](#) of COPD.

Next, the researchers compared that elapsed time in patients treated with azithromycin with those receiving placebo, adjusting their comparison for differences in age, gender and health and lifestyle indicators, and found that patients treated with azithromycin had a longer period between their first respiratory related hospitalization and the next hospitalization compared to patients treated with placebo. Among those re-hospitalized, the study found that age, gender, inhaled medication regimens and respiration measurements were similar between patients treated with azithromycin and those who received placebo.

"When comparing patients treated with azithromycin and those who received placebo, we found that there was a significant delay from the first respiratory-related hospitalization to the next one among those treated with azithromycin," said Dr. Martinez, who is also a professor of internal medicine at the university. "Also, looking at re-hospitalization due to any cause, we found there was a trend toward a delay between first and subsequent all-cause hospitalizations for patients taking azithromycin compared to those that did not take it."

While these results suggest prolonged [azithromycin](#) therapy may offer significant benefits to COPD patients, Dr. Martinez cautions that right now, the results of the post-hoc analysis provide an interesting hypothesis but no clear answers with regard to therapeutic recommendations. Additional studies will be needed to confirm the results, he added.

Provided by American Thoracic Society

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