Medical Xpress

Antibiotic therapy improves moderate exacerbations of mild-to-moderate COPD

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Antibiotic treatment with amoxicillin/clavulanate improves moderate exacerbations in patients with mild-to-moderate chronic obstructive pulmonary disease (COPD) and significantly prolongs the time between exacerbations, according to a new study from researchers in Spain.

"The existing evidence for antibiotic therapy in non-severe exacerbations of COPD is weak," said lead author Carl Llor, MD, PhD of the University Rovira i Virgili in Tarragona, Spain. "The results of our multicenter, randomized, double-blind, placebo-controlled trial show that antibiotic treatment is more effective than placebo in these patients, with an absolute difference in cure rates of 14.2%, and that the median time to next exacerbation is prolonged with antibiotic treatment, compared with placebo, from 160 to 233 days."

The findings were published online ahead of print publication in the American Thoracic Society's *American Journal of Respiratory and Critical Care Medicine*.

A total of 310 patients were enrolled in the study and randomized to receive either amoxicillin/clavulanate (500/125 mg) or placebo three times daily for eight days. All participants were at least 40 years old and had a spirometrically-confirmed diagnosis of mild-to-moderate COPD. The primary endpoint was clinical cure at the end of therapy visit.

A total of 117 patients in the amoxicillin/clavulanate group (74.1%) and 91 in the placebo group (59.9%) were considered cured at follow-up.

Median time to next exacerbation was significantly longer in the amoxicillin/clavulanate group. Clinical success, defined as either cure or improvement, was achieved in 90.5% of the antibiotic-treated group, compare with 80.9% of the placebo group. Capillary C-reactive protein (CRP) at a cutoff of 40 mg/l was found to be an excellent predictor of clinical outcome; patients with CRP levels below 40 mg/l were significantly more likely to be cured without the use of antibiotics.

The study had a few limitations, including a limited sample size and the lack of objective assessment of symptom resolution at follow-up, other than peak flow measurements.

"The clinical success rate we saw with amoxicillin/clavulanate treatment in our patients with mild-to-moderate COPD is higher than what has been seen in previous placebo-controlled trials which included patients with severe COPD," Dr. Llor said. "This suggests an effect of the severity of airflow obstruction on the rate of treatment success."

"We have shown that antibiotic treatment is superior to placebo in improving exacerbations in mild-to-moderate COPD," Dr. Llor concluded. "Many of these patients are treated in primary care settings, and our study supports the use of antibiotics to treat mild to moderate airway obstruction, mainly in patients with elevated CRP levels."

Provided by American Thoracic Society

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