Low-Dose Oral Steroids Work for Acute COPD

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FROM JAMA

Low-dose oral corticosteroids are as effective as high-dose intravenous corticosteroids in the initial treatment of acute exacerbations of COPD, according to findings from a retrospective cohort study of nearly 80,000 COPD hospitalizations.

In the study, 92% of the patients were initially given high-dose IV corticosteroids instead of less-risky low-dose oral steroids. This contrasts sharply with recommendations favoring a low-dose regimen included in clinical guidelines published by leading professional societies in the United States, the United Kingdom, and other European nations, said Dr. Peter K. Lindenauer of the Center for Quality of Care Research at Baystate Medical Center, Springfield, Mass., and his associates.

Dr. Lindenauer and his colleagues compared outcomes with these two treatment approaches using a database designed to measure health care quality and utilization. They reviewed the records of 79,985 hospitalizations for acute exacerbation of COPD at 414 U.S. medical centers over a 2-year period.

"Participating hospitals are geographically diverse and similar to the composition of acute care hospitals nationwide and are predominantly small to midsize nonteaching facilities that serve a largely urban patient population," they noted.

The study participants had a median age of 69 years and had COPD that was uncomplicated by pneumonia or pulmonary embolism. The primary outcome was a composite measure of treatment failure, defined as the need for mechanical ventilation after the second day of hospitalization; death during hospitalization; or readmission for COPD within 30 days of discharge.

Overall, 11% of patients had this primary outcome, with approximately 1% requiring mechanical ventilation, 1% dying during hospitalization, and 9% being readmitted.

A total of 92% of patients were initially treated with high-dose IV steroids, and 8% were started on low-dose oral steroids. The composite outcome of treatment failure occurred in 10.9% of patients given high-dose IV steroids and 10.3% of those given low-dose oral steroids, a nonsignificant difference.

Similarly, the individual outcome of in-hospital mortality was approximately 1% in both groups, the investigators said (JAMA 2010;303:2359-67).

Further analysis showed that patients given oral steroids as recommended had lower hospital costs and shorter lengths of stay. Previous studies of the issue have shown that the oral route decreases patient pain and immobility, they added.

The findings clearly show that not complying with treatment recommendations and instead giving high-dose IV steroids to patients with acute exacerbations of COPD "does not appear to be associated with any measurable clinical benefit and at the same time exposes patients to the risks and inconvenience of an intravenous line, potentially unnecessarily high doses of steroids, greater hospital costs, and longer lengths of stay," Dr. Lindenauer and his associates said.

"Because high-dose IV therapy is so common and because patients with COPD are hospitalized frequently for exacerbations, our findings have a significant potential to alter practice," they added.

This study was not designed to determine why so many clinicians in real-world practice don't comply with recommendations. ■

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Data Source: An epidemiologic cohort study of nearly 80,000 adults hospitalized at 414 U.S. medical centers for acute exacerbations of COPD.

Disclosures: Premier Healthcare Informatics of Charlotte, N.C., provided the data used in this study. The authors reported no financial conflicts of interest.