Glucocorticoids reduced short-term treatment failure in exacerbations of chronic obstructive pulmonary disease


**QUESTION:** In patients who are hospitalised with exacerbations of chronic obstructive pulmonary disease (COPD), do glucocorticoids reduce the rate of first treatment failure?

**Conclusion**

Systemic glucocorticoids reduced the rate of first treatment failure in patients hospitalised with exacerbations of COPD.

*See glossary.

**COMMENTARY**

Clinicians frequently use systemic corticosteroids to treat exacerbations of COPD. The underlying evidence has been modest, and guidelines have given only qualified support. A study by Davies and colleagues and this study by Niewoehner and colleagues change this by showing a clinically important benefit from systemic corticosteroids in exacerbations of COPD. Both trials reduced hospital stay by about 2 days. Niewoehner and colleagues found that corticosteroids reduced first treatment failure, Davies and colleagues showed a benefit with a lower daily steroid dose (50 mg) than that of Niewoehner and colleagues (60 mg). 2 weeks of treatment was beneficial, whereas 8 weeks was not necessarily better.

Both studies showed an improvement in airway obstruction, which could occur by direct effects on mucosal edema, mucus secretion, or airway inflammatory cells. This finding implies that corticosteroid-responsive airway inflammation may occur in exacerbations of COPD.

Other issues relating to the use of corticosteroids for exacerbations of COPD need clarification: what route? For how long? Should treatment be tapered or stopped abruptly? Similar issues surround the use of corticosteroids for exacerbations of asthma, and in general, a simple oral regimen is adequate, usually 30 to 50 mg/day abruptly ceasing after 14 days.

The treatment is not without risk. Patients with COPD who received systemic glucocorticoids had increased hyperglycaemia. Other studies have shown increased risks for secondary infections, cataracts, vertebral fractures, and myopathies. Clinicians can be reassured in their continued use of oral prednisone for exacerbations of COPD. Evidence about stopping may be just as important as evidence about starting.

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