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LUNG ALERT

Budesonide-formoterol reliever therapy in asthma

▲ Rabe KF, Atienza T, Maqyar P, *et al*. Effect of budesonide in combination with formoterol for reliever therapy in asthma exacerbations: a randomised controlled, double-blind study. *Lancet* 2006;**368**:744–53

This 12 month study was conducted in patients with moderate to severe asthma who were symptomatic on regular budesonide-formoterol maintenance therapy. All 3394 patients enrolled had had at least one severe asthma attack in the year before entry, and were randomised to receive budesonide-formoterol maintenance therapy (160 μg and 4.5 μg) plus one of three as needed therapies: budesonide-formoterol (160 μg and 4.5 μg), formoterol (4.5 μg) or terbutaline (0.4 mg). The primary outcome measure was time to first severe exacerbation, which was defined as an exacerbation resulting in emergency treatment or hospitalisation or the need for treatment for more than 3 days with oral steroids.

Time to the first severe exacerbation was prolonged in the group using budesonide-formoterol reliever therapy compared with either formoterol ($p = 0.0048$) or terbutaline ($p<0.0001$) alone. The yearly rate of exacerbation per patient was reduced by 33% in the budesonide-formoterol group compared with the formoterol group ($p<0.0001$) and by 48% compared with the terbutaline group ($p<0.0001$). The number of days without symptoms or reliever use and lung function increased in all groups. The number of adverse events was similar across all three groups.

Although the mechanism underlying the reduction in exacerbations seen with the use of budesonide-formoterol as both maintenance and reliever therapy is not known, this combination reduces the risk of severe exacerbations compared with maintenance budesonide-formoterol plus either formoterol or terbutaline. However, as needed formoterol provided better exacerbation control than terbutaline, so part of this effect may be due to formoterol.

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