

Long-term low-dose erythromycin in patients with unexplained chronic cough: a double-blind placebo controlled trial.

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Abstract

AIMS:

Unexplained chronic cough is a common condition with no satisfactory treatments. Previous work has suggested that cough may be linked to neutrophilic airway inflammation. This study tested the hypothesis that long-term low-dose erythromycin reduces the induced sputum neutrophil count and 24 h cough frequency in patients with unexplained chronic cough.

METHODS:

30 patients with an unexplained chronic cough lasting more than 8 weeks were randomly assigned to take 250 mg erythromycin once daily (n=15) or placebo (n=15) for 12 weeks in a double-blind parallel group study. Cough frequency, cough reflex sensitivity and cough severity were assessed at baseline, 6, 12 and 24 weeks. The primary outcome measure was change in 24 h cough frequency at 12 weeks.

RESULTS:

There was no difference in the change in cough frequency between the erythromycin and placebo groups at 12 weeks (mean difference in fold change 1.1; 95% CI 0.7 to 1.5; p=0.585) or at other times. There was a statistically significant between-treatment difference in the change in sputum neutrophils at 12 weeks (-10.2% vs +6.6% with erythromycin and placebo; mean difference 16.8%; 95% CI 1.6 to 32.1; p=0.03) but not at other times. There was no difference in the change in other measures of cough between treatments.

CONCLUSIONS:

Treatment with low-dose erythromycin for 12 weeks reduces the induced sputum neutrophil count but not cough frequency or severity in patients with unexplained chronic cough.