

## JOURNAL CLUB

## Erythromycin to prevent exacerbations of bronchiectasis

The purpose of this study was to evaluate whether low-dose erythromycin would reduce pulmonary exacerbations in patients with non-cystic fibrosis (CF) bronchiectasis with a history of frequent exacerbations. In comparison to previously published work using azithromycin prophylaxis, a prolonged period of 12 months was used for evaluation and there were attempts to more precisely quantify the bacterial resistance associated with prolonged macrolide use.

In this randomised, double-blind, placebo-controlled trial, 679 patients were screened with 117 randomised after the exclusion criteria were applied. A total of 107 completed the study. Reasons for exclusion included no high-resolution CT confirmed bronchiectasis and insufficient pre-trial exacerbations. Fifty-nine individuals were randomised to the erythromycin group (oral erythromycin ethylsuccinate 400 mg twice daily) and 58 to the placebo group.

There was a significant reduction in 'protocol defined pulmonary exacerbations' in the erythromycin group. In the pre-specified subgroup of patients with baseline *Pseudomonas aeruginosa* airway infection, again there was significant improvement. There was an increase in the proportion of macrolide-resistant oropharyngeal streptococci in the erythromycin group.

Long-term, low-dose erythromycin appears effective in reducing pulmonary exacerbations in non-CF bronchiectasis. There is evidence that it may also protect against lung function decline and contribute to a reduction in sputum production. Of concern is the significant increase in macrolide oropharyngeal streptococci resistance. For this reason, it may be advisable for a larger, multicentre population study of longer duration to be carried out prior to any widespread application in clinical practice. A study comparing erythromycin, azithromycin and placebo using similar outcome measures would be of interest.

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### REFERENCE

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