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Azithromycin 250 mg daily reduces exacerbation frequency and improves quality of life in selected COPD patients

This multicentre study randomised 1142 subjects at risk of acute exacerbations of chronic obstructive pulmonary disease (COPD) to receive azithromycin 250 mg daily (n=570) or placebo (n=572) for 1 year, in addition to usual care. The enrolled subjects were allowed to continue on inhaled treatments and/or oxygen. None of the subjects were on oral theophylline. The primary outcome, time to the first exacerbation, was significantly increased to 266 days (95% CI 227 to 313) in the azithromycin group compared with 174 days (95% CI 143 to 215) in the placebo group. The HR for having an acute exacerbation of COPD per patient-year was 0.73 in the azithromycin group compared with the placebo group. The secondary outcomes included quality of life measures (St George's Respiratory Questionnaire (SGRQ) scores), which improved more in the azithromycin compared with the placebo group. There was no significant reduction in hospitalisation rates and emergency department or urgent care visits and no difference in mortality. Hearing loss was more common in the azithromycin group and increased colonisation with macrolide resistant pathogens was noted.

The authors concluded that the addition of azithromycin to usual care of COPD patients who have had an acute exacerbation in the last year or require oxygen supplementation is a valuable option but careful patient selection is required with the exclusion of patients with or at risk of QTc prolongation, resting tachycardia (>100 beats per minute) and hearing defect. Concern also remains about the long-term effects of daily azithromycin on bacterial resistance patterns in the community. Further studies with mortality, hospitalisations and bacterial resistance as primary end points are warranted.

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