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Targeted Retreatment of Incompletely Resolved COPD Exacerbations With Ciprofloxacin

COPD, COPD - exacerbations

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Rationale: Raised serum C-Reactive Protein (CRP) 14 days after a COPD exacerbation predicts a second exacerbation, presumably due to persistent inflammation or bacterial infection. We examined if a further exacerbation could be prevented by re-treating incompletely resolved COPD exacerbations using Ciprofloxacin.

Methods: This multi-centre randomized double-blind placebo-controlled study assessed retreatment with twice daily oral ciprofloxacin 500mg vs placebo for 7 days in patients whose symptoms and/or CRP had not normalised (<8mg/L) following an index exacerbation 10-14 days earlier. The primary outcome was the time to next exacerbation within a 90-day period.

Results: Of 826 COPD patients screened at 4 centres, 144 eligible participants with incomplete recovery at day 12-16 post exacerbation were randomised to ciprofloxacin (n=72) or placebo (n=72). Patients had baseline mean age 69.0, 63.2% male, FEV1 49.5% predicted and CAT score 20.5.

Median time to the next exacerbation was 32.5 days (IQR 13-50) in the placebo arm and 34 days (IQR 17-62) in the treatment arm. After pre-specified adjustments for previous exacerbations and site there were no significant differences between the groups (p=0.76) (fig 1). No significant differences were seen in CAT, SGRQ or lung function between treatment groups.

Conclusion: In patients with incomplete recovery after a treated COPD exacerbation, an additional course of ciprofloxacin provided no additional benefit relative to placebo.

