

## OP07.1

### Disease course of lower respiratory tract infection with a bacterial aetiology in primary care

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**Background and Aim:** Bacterial pathogens are assumed to cause a different illness course than non-bacterial causes of acute cough, but evidence is lacking. Insight into the illness course of bacterial lower respiratory tract infection (LRTI) that is not treated with antibiotics could help guide empirical antibiotic prescribing, support a strategy of watchful waiting, and improve patient information. We evaluated the disease course of LRTI with a bacterial aetiology in adults presenting with acute cough in primary care.

**Method:** Secondary analysis of a multi-centre European trial in which 2061 adults with acute cough ( $\leq 28$  days' duration) were recruited from primary care and randomised to amoxicillin or placebo. For this analysis only patients in the placebo group ( $n=1021$ ) were included reflecting natural course of disease. Standard microbiological and serological analysis were performed at baseline to define bacterial aetiology. All patients recorded symptoms in a diary each day for four weeks. Disease course of patients with a bacterial aetiology was compared to those without bacterial aetiology on symptom severity in days 2-4, duration of symptoms rated 'moderately bad or worse' and reconsultation.

**Results:** Of 1021 eligible patients, 187 were excluded because of missing diary results, leaving 834 patients of whom 162 (19%) had bacterial LRTI. Patients with bacterial LRTI had worse symptoms at day 2-4 after presentation (difference= 0.19, 95% CI 0.01-0.36;  $p=0.038$ ) and more often reconsulted 27% (44/162) vs. 17% (114/660) than those without bacterial LRTI (OR 1.80, 95% CI 1.20-2.71;  $p=0.005$ ). Resolution of symptoms rated 'moderately bad or worse' did not differ between patients with and without bacterial LRTI (HR 0.92, 95% CI 0.77-1.10;  $p=0.363$ ).

**Conclusions:** Patients who present in primary care with acute bacterial LRTI have a slightly worse course of disease when compared to those without an identified bacterial aetiology, but the relevance of this difference is doubtful.