Effectiveness of early switch from intravenous to oral antibiotics in severe community-acquired pneumonia: multicenter randomized trial

Jan Jelrik Oosterheert, Marc J M Bonten, Margriet M E Schneider, Erik Buskens, Jan-Willem J Lammers, and Andy I M Hoepelman
Correspondence to: i.m.hoepelman@umcutrecht.nl

ABSTRACT

Objectives Effectiveness of early switching to oral antibiotics compared with the standard 7-day course of intravenous antibiotics in severe community-acquired pneumonia.

Design Multicenter parallel randomized controlled, open-label, trial. A central randomization center used computer-generated tables to allocate treatments.

Setting Five teaching hospitals and 2 university medical centers in the Netherlands.

Participants 302 patients in non-intensive care wards with severe community-acquired pneumonia. 265 patients fulfilled the study requirements.

Intervention Three days of treatment with intravenous antibiotics followed, when clinically stable, by oral antibiotics or by 7 days of intravenous antibiotics. Follow-up 28 days.

Main outcome measures: Clinical cure and length of hospital stay.

Results 302 patients (early switch n=152; standard care n=150) were randomized (mean age 69.5 (standard deviation 14), mean pneumonia severity score 112.7 (26.0)). 37 patients were excluded from analysis because of early dropout before day 3, leaving 265 (n=132; n=133) patients for intention to treat analysis. Clinical cure was 83% in the intervention group and 85% in the control group (2%, −7% to 10%). Duration of intravenous treatment and length of hospital stay were reduced in the intervention group, with mean differences of 3.4 days (3.6 (1.5) v 7.0 (2.0) days; 2.8 to 3.9) and 1.9 days (9.6 (5.0) v 11.5 (4.9) days; 0.6 to 3.2), respectively. Mobility and other side effects were comparable across groups.

Conclusions Early switch from intravenous to oral antibiotics in patients with severe community-acquired pneumonia is safe and decreases length of hospital stay by 1.9 days.

Trial registration Clinical Trials NCT00273676.

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