

Respiratory infections

Antibiotic treatment in community and hospital acquired pneumonia complicated by *Clostridium difficile* infection.

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Introduction: *Clostridium difficile* infection (CDI) is one of the most common gastrointestinal complication after an antimicrobial treatment. It is estimated that CDI after the pneumonia treatment is connected with a higher mortality than other causes of hospitalization.

Objectives: To assess the relationship between individual antibiotic intake and mortality of *Clostridium difficile* infection after pneumonia treatment.

Methods: A retrospective analysis of 217 patients with CDI in the Internal Medicine Ward, Medical University of Warsaw was conducted. In 94 patients who were treated for pneumonia CDI was diagnosed. To emphasize a correlation between mortality of CDI and the antibiotic therapy the fraction test was performed.

Results: Out of 94 patients 52% went through a severe or severe and complicated infection. Among severe cases 62,5% (n - 30) of records were provided with ceftriaxone, 45,8% (n - 22) - ciprofloxacin, 41,6 % (n - 20) - amoxicillin with clavulanic acid, 29,2% (n - 14) - clarithromycin, 22,9% (n - 11) - cefuroxime, 20,8% (n-10) - imipenem. The fraction test revealed statistically significant mortality rate in a group of patients who were provided with ceftriaxone.

Conclusions: The study shows there is a correlation between the antibiotic treatment of pneumonia and mortality rate in patients who developed CDI due to the chosen therapy. There was a significant mortality rate according to ceftriaxone intake. The antimicrobial treatment of pneumonia need to be adjusted individually to patients with higher risk of CDI in order to decrease incidence and mortality.