

Title: Impact of initial antibiotic choice on clinical outcomes of community-acquired pneumonia in adults: analysis of a hospital claims-made database

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Abstract:

BackgroundThe choice of empiric antibiotic regimen for the treatment of CAP is based on the likelihood that a given pathogen is present and on the antibiotic susceptibilities of pathogen in the community.**Purpose**Using the antibiotic regulation guidelines of the Bureau of National Health Insurance and Antimicrobial Stewardship Program in Taiwan, we examined the impact of initial antibiotic choice on the outcome of CAP.**Methods**In this study, we retrospectively reviewed patients with CAP who were hospitalized in Kaohsiung Municipal Siaogang Hospital between January 2012 and December 2014. We assessed the outcome parameters, including pathogens, total hospital costs, total antibiotic costs, length of hospital stay (LOS), and 30-day readmission rate. We compared the outcome parameters of 2 groups: the 1st line antibiotics group and the 2nd antibiotics group.**Results**A total of 568 patients were enrolled in the study. The median age of the patients was 54 years. Sputum specimens were obtained from 139 patients (24.5%). *K. pneumoniae* (25.9%), *P. aeruginosa* (13.7%) and *S. aureus* (5.8) were the most frequent causative bacteria. Compared to the 1st ATB group, the 2nd ATB group had a higher trend in total antibiotic costs, but no significant difference (Fisher's Exact Test, $p=0.065$). There was no significant difference in total hospital costs, length of hospital stay (LOS), and 30-day readmission rate.**Conclusion**The 2nd ATB group did not demonstrate a better outcome. This was probably due to the difference in disease severity and different pathogen. In Taiwan, the most common causative pathogen of CAP is *S. pneumoniae*, but in our region, the most common causative pathogen of CAP is *K. pneumoniae*.