ANTIBIOTIC RESISTANCE IN COMMUNITY - ACQUIRED PNEUMONIA: A ROMANIAN EXPERIENCE

D.I. Udeanu 1, C.E. Diaconu 2, A.L. Arsene 3, D. Drăgănescu 4, M. Ghica 5

1 Clinical Laboratory and Food Safety Department, Faculty of Pharmacy, University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania
2 Internal Medicine Department, Clinical Emergency Hospital, Bucharest, Romania
3 Pharmaceutical Microbiology, Faculty of Pharmacy, University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania
4 Pharmaceutical Physics Department, Faculty of Pharmacy, University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania
5 Biostatistics Department, Faculty of Pharmacy, University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania

Contact: denisa.udeanu@umfcd.ro, denisaudeanu@gmail.com

BACKGROUND. Community - acquired pneumonia (CAP) is an infectious disease with major impact on population being an important cause of mortality, morbidity and high-cost health care worldwide. The gravity of the infections is variable, but some strains can cause severe infections with increased mortality correlated with host related factors. The treatment of the disease remains empiric targeting the most likely pathogens commonly involved.

OBJECTIVE. The study aims to identify the most common pathogens involved in the community-acquired pneumonia in our hospital, to determine the antibiotic resistant strains and monitor the patient evolution in order to identify the main causes of possible treatment failure and increased mortality.

MATERIALS AND METHODS. The one-year study (2017) involved 170 patients hospitalized in the Clinical Emergency Hospital, Bucharest, Romania and diagnosed with community-acquired pneumonia. The study mainly focused on the initiated pharmacotherapy, the situation of prescribing antibiotics: active substances available in the hospital’s pharmacy, their associations, changes due to the bacterial resistance.

RESULTS

SURVIVAL - AGE

PREVALENCE OF COMORBIDITIES

GERMS PREVALENCE ACCORDING TO THE ANTIGRAM

Antibiotic resistance index of the most important isolates

Expected Germs according to the CAP guidelines: Streptococcus pneumoniae, Hemophilus influenzae, Chlamydia pneumoniae, Mycoplasma pneumoniae. Additionally to M. tuberculosis in patients with compromised immune system.

CONCLUSIONS

- Community - acquired pneumonia (CAP) is a disease treatable in early stages if it is correctly diagnosed.
- The antibiotic treatment was empirical established according to the CAP guidelines and targeted the most probable germs.
- E. coli, Pseudomonas spp, S. aureus, A. baumannii, Klebsiella spp. were the most incriminated etiological agents. The infection with these germs is common in nosocomial pneumonia and less encountered in CAP.
- Social-demographic and host-related factors played a critical role in the outcome of the disease and were correlated with some cases of failure response to treatment and increased mortality.