Respiratory infections

0033

Microbiological Diagnosis of Lower Respiratory Tract Infections in Patients hospitalized in the Military Institute of Medicine in 2017

Agnieszka Woźniak-Kosek[1], *Aneta Guzek*[1], *Monika Olak*[1], *Elżbieta Bareja*[1], *Ewa Zwolińska*[2]
[1]*Military Institute of Medicine, Department of Medical Diagnostics , Warsaw, Poland*
[2]*Holy Family Maternity Hospital, Department of Gynecology , Warsaw, Poland*

Microbiological diagnostics of lower respiratory tract infections is rarely performed in outpatient settings. It is recommended in patients who are hospitalized with a diagnosis of pneumonia or severe exacerbation of COPD (chronic obstructive pulmonary disease). The aim of this study was to determine the etiology of lower respiratory tract infections in patients hospitalized in the Military Institute of Medicine from January to June 2017. Microbiological studies of 483 clinical materials were performed. The most frequent was 42.24% bronchial and bronchoalveolar wahings, followed by bronchial aspirates - 22.77%, pleural fluids 15.94%, and the remaining 19% were sputum and bronchial secretions. 237 cases of various pathogens were detected in the examined material. The largest group was *Enterobacteriaceae* with *Klebsiella pneumonia* and *E. coli* and a group of Gram-positive bacteria with *S. aureus*, the other groups were other *non-Enterobacteriaceae* with *Acinetobacter baumani* and *Pseudomonas aeruginosa*, and *Candida* and Gram negative group with *Haemophilus influenzae*. Several different resistance mechanisms have been identified among the microbial clinical isolates. The most common was ESBL and MLSB. The analysis shows that microorganisms considered to be etiologically relevant should be identified at the species level and then labeled with drug sensitivity. Detected resistance mechanisms should be taken into account, using the laboratory methods available in the laboratory. The most important risk factors of the infection with drug-resistant pathogens are: prolonged mechanical ventilation, primary immunosuppression or prolonged hospitalization. Properly conducted hospital microbiological diagnostics is a valuable addition to the clinical and radiological picture in patients with lower respiratory tract infections. In every situation, it is also very important for the clinician to cooperate with the microbiologist while choosing the appropriate testing methods and then interpretation of the results obtained.