

P2014

Abstract (poster session)

Isolation rate and patterns of pathogens isolated from hospitalised patients with community-acquired pneumonia (CAP) in clinical trials in Central and Eastern Europe (CEE)

O. Stetsiouk*, V. Khokhlova, A. Karelin, M. Belotserkovsky (Smolensk, RU; Zug, CH)

Backgrounds: Treatment of CAP in hospitalized adults is one of the primary cornerstones in evaluation of new antibiotics. Landscape of pathogens in adult CAP patients is of essential interest for designing antibacterial drug development program. **Objectives:** To investigate aetiology of CAP in hospitalized patients participating in clinical trials in CEE countries. **Methods:** Pooled microbiology data from two identical phase 3 clinical trials of novel cephalosporin in patients hospitalized for CAP were analyzed to determine “typical” bacteria patterns in CEE. Hospitalized CAP patients with PORT risk class II-IV previously not treated with antimicrobials were enrolled. Blood and respiratory cultures were obtained before the study therapy. Samples were sent to regional referent microbiology laboratories where the standard pathogen identification was performed. **Results:** Respiratory samples were obtained in 339 CAP patients. Using regional microbiology labs pathogens were cultured in average in 75% of samples. The rate of positive cultures was from 94% in Ukraine to 58% in Russia. *S. pneumoniae* was isolated in just 6% of patients, with maximum rate in Romania (17%). *H. influenzae* was isolated in 11% of patients, with the highest frequency in Romania, Bulgaria and Ukraine (14- 15%). *S.aureus* was isolated in in RF and Ukraine in 11-12% of cases, but in significantly fewer number of samples in other CEE countries. Patients in RF had the highest rate of CAP caused by *K. pneumoniae* and *E. coli* (10% and 6%, respectively). *P. aeruginosa* was revealed in CAP in isolated instances only. Regional microbiology laboratories in Ukraine, RF, Bulgaria and Romania frequently reported also non-pathogenic bacteria for CAP, such as coagulase-negative staphylococci (CNS), *Streptococcus* spp., *H. parainfluenzae* and *Candida* spp. **Conclusion:** Establishing regional referent microbiology laboratories in emerging regions (e.g. in CEE) allows reliably secure high level of pathogen identification in CAP (in average 75%). Patterns of “typical” bacteria isolated from hospitalized patients with CAP in different CEE countries are notably distinct. These data should be taken into consideration while planning and conducting clinical trials in CAP in CEE.