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Abstract (oral session)

Bacterial nosocomial pneumonia in a newly constructed medical centre in Saint Petersburg, Russia

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Materials and methods: Bronchoscopy was performed in 116 cases of nosocomial pneumonia. Bronchoalveolar lavage fluid (BAL) was investigated microbiologically. The identification was performed by routine methods and by sequencing of 16sRNA gene (ABI Prism 3130, MicroSeq ID 16s rDNA500 Library v2.0). Resistance to routinely used antibiotics was investigated with dilution techniques on Muller-Hinton agar (Oxoid, GB). Results: 151 bacterial strains were isolated from BAL in 116 cases of nosocomial pneumonia in 2010-2011. Gram-positive bacteria were revealed in 76 (50.3%) cases. *E. faecalis* was isolated from BAL in 27 (17.9%), *E. faecium* in 17 (11.3%), *S. aureus* in 16 (10.6%), *S. epidermidis* in 10 (6.6%), *S. pneumoniae* in 2 (1.3%), *S. mitis* in 2 (1.3%) and *B. cereus* in 2 (1.3%) patients. Totally 75 (49.7%) gram-negative bacteria were isolated from BAL: *K. pneumoniae* in 20 (13.2%), *P. aeruginosa* in 15 (9.9%), *A. baumannii* in 11 (7.3%), *E. coli* in 10 (6.6%), *S. maltophilia* in 6 (3.9%), *Enterobacter* spp. (*E. aerogenes*, *E. cloacae*) in 6 (3.9%), *S. marcescens* in 1 (0.7%), *P. fluorescens* in 1 (0.7%), *B. cepacia* in 1 (0.7%), *M. catarrhalis* in 1 (0.7%), *C. freundii* in 1 (0.7%), *P. mirabilis* in 1 (0.7%), *K. oxytoca* in 1 (0.7%) case. Resistance to antibiotics was revealed in 140 (92.7%) strains. Resistant to 4 and more antibiotics were 70 (46.4%) isolates. The highest ratio of polyresistant strains were observed in *E. faecium* (100.0%), *A. baumannii* (90.9%), *S. epidermidis* (70.0%). Meticillin-resistant were 3 (18.7%) of *S. aureus* and 7 (70.0%) of *S. epidermidis* strains. No resistance to linezolid and daptomycin was observed in gram-positives, to tigecycline in gram-negatives. Conclusions: 1. Gram-positive and gram-negative bacteria were revealed with the same frequency in cases of nosocomial pneumonia. 2. Most of bacterial isolates (92.7%) were resistant to antibiotics, one half of isolates were polyresistant. 3. Meticillin-resistance was predominantly observed in *S. epidermidis*. 4. All gram-positive microorganisms were susceptible to linezolid and daptomycin, gram-negative - to tigecycline.