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Title: Resistance of problematic gram(-) respiratory pathogens selected from in-patients (Yaroslavl, Russia, 2011)

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Body: Background: the problem of the spread of resistant Gram(-) agents becomes more urgent. These changes in the respiratory pathogens in hospitals create difficulties in antibiotic therapy and lead to increase of patients' lethality and the burden for general healthcare. The aim of our study was to assess the prevalence of resistance of the problematic Gram(-) pathogens in hospitalized patients. Methods: pathogens were isolated from hospitalized patients in Yaroslavl. The selection of pathogens and the determination of resistance was performed centrally in the microbiological laboratory (NCCLS standards, disc-diffusion method). Results: in 2011 in the city's hospitals 98 strains of *Ps. aeruginosae*, 71 - *Acinetobacter* spp were allocated from respiratory tract in hospitalized patients. Resistance of *Ps. aeruginosae* was extremely high practically to all drugs, including carbapenems. The only exception was polymyxin (all strains were sensitive). The average rate of resistance was 39.2%. Resistance *Ps. aeruginosae* to piperacillin/tazobactam, cefoperasone/sulbactam, imipenem, meropenem, ciprofloxacin, gentamycin, amikacin was 51, 48, 48, 49, 54, 47 and 48% respectively. At a relatively acceptable level there was observed resistance to ceftazidime, cefepime and aztreonam - 16, 23, and 15% respectively. *Acinetobacter* spp. also showed a high resistance (in average of 61.9%). Carbapenems remained active (imipenem - 99% of strains were sensitive, meropenem - 94%). Conclusions: the problematic respiratory Gram(-) pathogens as *Ps. aeruginosae* and *Acinetobacter* spp. show high resistance to antimicrobial agents. The greatest concern is the resistance to carbapenems in *Pseudomonas aeruginosa*.