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**Title:** Epidemiological features of hospital-acquired pneumonia in a neurosurgical center in Ukraine

Dr. Alexei 1093 Birkun huskygo@gmail.com<sup>1</sup>.<sup>1</sup> Anaesthesiology and Emergency Medicine, Crimean State Medical University, Simferopol, Ukraine, 95000 .

**Body:** Background. It is generally recognized that effective management of hospital-acquired pneumonia (HAP) should be based on detailed knowledge of specific epidemiological pattern in a given medical facility. Aim. To evaluate local epidemiological profile of HAP in one of leading neurosurgical centers in the southern Ukraine, including HAP incidence, outcomes, range of causative agents and their susceptibility to antibiotics. Methods. A retrospective (2006-2011) analysis of 4528 medical records including 115 cases complicated with HAP was performed. Results. HAP was diagnosed in 2.5% of neurosurgical patients on record. In 89 cases (77.4%) HAP was ventilator-associated. Fatal outcome and recovery were registered for 41.7% and 37.4% of HAP patients, respectively. Bacteriological analysis of sputum was performed in 62.6% of HAP cases only. From the overall number of bacteriological assays (n = 484) 6.6% showed no microbial growth. The most common isolated pathogens were *Pseudomonas aeruginosa* (26.5%), *Candida* spp. (13.4%), *Klebsiella pneumoniae* (10.1%) and *Proteus mirabilis* (9.1%). *P. aeruginosa* largely exhibited resistance to antipseudomonal drugs, such as ciprofloxacin (97.7%), ceftazidime (97.3%), gentamicin (96.2%), cefepime (94.6%) and amikacin (91.6%). Conclusions. Increased mortality and high incidence of HAP, low bacteriologic coverage of HAP cases and excessive antimicrobial resistance of *Pseudomonas* were revealed. The results should be utilized to remove shortcomings in local practice of HAP treatment and microbiologic testing in the neurosurgical center. Also they may be helpful for improvement of relevant protocols of medical care in surgical facilities of Ukraine in whole.