

## **Prevalence of nosocomial pneumonia in severe trauma patients (according to autopsy data)**

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**Objectives:** Nosocomial pneumonia (NP) is one of most serious infectious complications in severe trauma patients, especially in those who receive mechanical ventilation. Data on the prevalence and etiology of NP in severe trauma patients are scarce as diagnostics of NP is difficult and in some cases NP remains undiagnosed. Thus, the objective of our study was to assess prevalence and etiology of NP in died patients with severe trauma.

**Methods:** Retrospective analysis of medical records and autopsy protocols of died patient from 2 traumatology and 1 neurosurgery units of Clinical Hospital of Emergency Medicine.

**Results:** Among 9771 trauma patients hospitalized in 2001-03 the overall mortality rate was 4,7%. Autopsy was performed in 411/458 (89,7%) patients. Morphological signs of NP was found in 138 (33,6%) patients. NP was most common in patients with head trauma (79%), chest trauma (26,8%) and proximal femoral fractures (10,9%). Mean age was 51,9±17,6 (21-89) years. Impaired consciousness presented in 97,8% patients; 81,9% patients were admitted to ICU, 78,3% patients were mechanically ventilated. Bilateral pneumonia was observed in 84,7% patients, pleurisy – in 19,6%, right sided pneumonia – in 9,5% and left sided pneumonia – in 5,8%. In spite chest X-ray was performed in all patients, it failed to reveal 34,1% cases of NP intravitaly. Microbiological investigation both intravitaly and postmortem was performed in 21,7% cases. Among pathogens isolated *Acinetobacter* spp. (20%), *Pseudomonas aeruginosa* (20%), *Klebsiella pneumoniae* (14%) and *Proteus mirabilis* (8%) were the most common.

**Conclusion:** NP is a frequent infectious complication in severe trauma patients that difficult to diagnose intravitaly. The most common pathogens of NP in this category of patients are gram-negative bacteria that should be taken into consideration for choice of empirical antimicrobial therapy.