**Introduction:**
Increasing resistance to carbapenems due to carbapenemase production – one of main actual problems of antibacterial resistance in burn ICU. Production of several types of carbapenemases (KPC, NDM and OXA-48) is common in K. pneumoniae strains. Carbapenemase production is a marker of extreme antibacterial resistance. The aim of our study was to investigate the epidemiology of nosocomial infections caused by producing KPC, NDM and OXA-48 K. pneumonia strains in burn ICU.

**Methods:**
Total of 26 patients with nosocomial infections caused by 26 carbapenem resistance strains of K. pneumoniae were included in the study, from whom 3 had lower respiratory tract infection, 23 had skin and skin structure infection. Initial identification of isolates was performed in laboratory by automatic microbiological analyzer. For all of K. pneumoniae isolates presence of bla_{NDM}, bla_{OXA-48} and bla_{KPC} – genes were examined by PCR method.

**Results:**
Baseline characteristics of patients: Me (IQR) of age – 50 (39; 64) years, Me (IQR) of TBSA – 40 (29; 52) percent, Me (IQR) of ICU LOS – 30 (21; 35) days. Inhalation injury was diagnosed in 10 (38.4%) patients. Total of 11 patients died, mortality rate was 42.3%. All patients were diagnosed with nosocomial infection caused by K. pneumoniae. From 26 K. pneumonia strains 1 (3.8%) were found to be producing KPC, 3 (11.5%) – producing NDM and 20 (76.9%) – producing OXA48. Only 5 (19.2%) carbapenem resistance K. pneumoniae isolates were not producing carbapenemases. From 20 patients infected by OXA48 producing K. pneumoniae 20 patients died, mortality rate was 40%. From 23 patients infected by OXA48 or NDM producing K. pneumoniae 10 patients died, mortality rate was 43.5%. From 5 patients infected by non-carbapenemase producing K. pneumonia no one died.

**Conclusion:**
Carbapenemase producing strains are widely spread among carbapenem resistance strains of K. pneumoniae in burn ICU. Mortality of patients infected by producing OXA48 or NDM K. pneumoniae strains reaches 43.5%.