

ABSTRACT

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Title of diploma thesis: The incidence of multidrug resistant strains of *Klebsiella spp.* at UH in Hradec Kralove in the years 2008-2010

Klebsiella pneumoniae producing a broad spectrum beta - lactamases (ESBLs) are of global common pathogen causing nosocomial infections that are associated with higher mortality and limiting treatment options. To prevent nosocomial transmission is necessary to determine and compliance with procedures of the correct nursing practice focused on multidrug-resistant strains.

The practical part is focused on the occurrence of ESBL-producing *K. pneumoniae* in a University Hospital Hradec Králové from January 2009 to December 2010. The file contains all the positive culture of material from patients of HK Hospital. The incidence of *K. pneumoniae* is evaluated by material, capture the individual clinics, in intensive and standard care, in surgical specialties, age and time.

In 2009 is isolated a total of 1545 strains of ESBL -producing *K. pneumoniae*, 1716 strains in 2010. The most positive material is urine (34-35 %) and samples from the respiratory tract (43-52 %). ESBL *K. pneumoniae* account for 33 % in 2009 and 40 % in 2010 from all of *K. pneumoniae* isolated from blood cultures. The highest prevalence is observed in intensive care units, in wards with long-term hospitalization and with the elderly.

Is confirmed the growing trend of ESBL *K. pneumoniae* in patients in hospital care. Infection by this pathogen still remains a problem especially in elderly patients. Prevention of spread is an important part of good medical and nursing care.