

## ABSTRACT

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*Escherichia coli* is one of the most common pathogens occurring in the hospitals. Currently bacterial resistance to antibiotics represents major clinical problem all over the world, which can potentially lead to treatment failure or even death of the patient, where resistant bacteria are etiological agents of serious diseases.

The practical part of the thesis focuses on the analysis of multidrug-resistant strains of *Escherichia coli* in the University Hospital Hradec Králové for period of time 2008 - 2012. As the positive materials were considered all positive culture materials from patients hospitalized or coming to FN HK. The analysis was evaluated according to the material, individual clinics, intensive and standard units, surgical clinics, age and time.

The result of my thesis was an analysis of the multidrug resistant strains of *Escherichia coli*, where was isolated 1562 positive isolates. As for the risk factors can be considered Department of Gerontology and Metabolic and its patient ward A, where the largest first positive detection was reported. A major problem are the Intensive Care Units or non-surgical clinics. The increase of incidence of positive first seizures is also confirmed in patients in hospital care. Another important risk factor is age. Infections by multidrug-resistant strains remain problem of older patients, most in the range of 56 - 75 years. An important prerequisite in preventing the spread is a good medical and nursing care.