

Genetic similarities of *Escherichia coli* isolated from hospitalized patients

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ABSTRACT

Introduction: *Escherichia coli* is a component of human physiological flora. Pathogenic *E. coli* strains are a significant etiologic factor for numerous infections, mainly the urinary system, digestive system, respiratory system as well as bacteraemia and post-operative infections.

Purpose: To compare the genetic similarity of *Escherichia coli* strains, isolated from biological material collected for routine microbiological diagnostics.

Materials and methods: The examination performed on the *Escherichia coli* strains, isolated from material collected from patients hospitalized in various clinics and delivered for routine laboratory diagnostics. The analysis was conducted using the ADRSSR method.

Results: As a result of the analysis of genetic similarities of examined strains using the ADRSSR method, nine clones were distinguished, clones A and B considered being most numerous. Clone A was predominant in samples from internal diseases clinics while cloning B – from neonatological clinics.

Conclusions: The results point to a significant role of monitoring of homogeneity of bacteria strains isolated in the range of the health care providers. It is directly connected with the safety of hospitalized patients as well as effectiveness and course of the treatment. The use of the ADSRRS method gives the opportunity of early detection of the moment of colonization in the monitored place.

Keywords: *Escherichia coli*, ADSRRSA

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