

LONG-TERM CHANGES IN THE EPIDEMIOLOGY OF FOODBORNE INTOXICATION IN SLOVAKIA FOR PAST 20 YEARS

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Abstract

The goal of the study was to analyze the changes in the epidemiology of bacterial alimentary intoxications in Slovakia in the last 20 years using the Epidemiological information system (EPIS).

The epidemiological situation in the occurrence of reported alimentary intoxications in the Slovakia is extremely favorable in comparison with the world. In the years 2000 - 2020, only 4,085 cases of diseases were recorded by the epidemiological information system (average morbidity of 3.78/100,000 inhabitants). Staphylococcal intoxications dominated among them (49.01%) and so-called unspecified bacterial food poisoning (44.95%). The frequency of other analyzed diagnoses did not exceed 5% in the monitored period. Statistical analysis of the collected data was performed using non-parametric tests, which are ideal for comparing independent values. For testing two selections was chosen the Mann-Whitney test, for verifying the differences in three or more files, it was necessary to use its direct generalization in the form of the Kruskal-Wallis test. Existence of a statistically significant difference was at the level of significance $\alpha = 0.05$.

In terms of regional distribution the highest concentration of cases (51%) was recorded in western Slovakia ($p > 0.05$). An increased frequency of the disease was observed in the summer months, evenly in both sexes, 2,047 in men and 2,038 in women ($p > 0.05$). The maximum morbidity 29% in children aged 0 - 14 years were represented ($p < 0.05$). There are demonstrably two specific categories, namely pre-productive and productive age, there is statistically significant difference. Most of those injured became infected after eating a mixed diet (45%), but other frequently reported transmission factors included contaminated food (18%), poultry (10%) or beverages (7%). The highest numbers of those infected were recorded in catering establishments at workplaces, schools, medical facilities, fast food stalls and public catering establishments.

Bacterial food intoxications are a serious global problem and their prevention must be one of the top priorities of the food safety system. An essential part of preventive measures is also the increase of food education, the need to comply with the prescribed production process and consumer information, each of which should master the principles of proper storage and processing of food.

Key words: Foodborne intoxication, Food, bacteria, Epidemiological information system, Slovakia.