

## ABSTRACT

Recent published studies have provided new information about the significant influence of environmental factors, especially air pollution in the development of acute coronary syndrome. Besides the well-known controllable and uncontrollable risk factors it is necessary to focus on non-conventional risk factors. The thesis aims to determine whether there is a statistically significant relationship between the days in which patients with acute coronary syndrome type STEMI were rescued by the EMS Most and the average daily concentrations of pollutants in air (PM<sub>2,5</sub> and PM<sub>10</sub>, ozone, carbon monoxide and nitrogen dioxide) in seven previous days. The research methodology is based on a retrospective observational analysis of 116 patients with acute myocardial infarction in prehospital emergency care and the impact of the above pollutants in air with the use of statistical methods. The results in sets of ozone and nitric oxide effect presents a significant impact of day ( $p=0.0283/0.0424$ ), sex ( $p=0.0216/0.0232$ ) and age ( $p=0.0008/0.0187$ ). Although we have found a statistically significant effect of a day, gender and age in our analysis, it is necessary to continue research in a larger statistical sample to minimize the statistical errors.

Key words: acute coronary syndrome, air pollution, emergency medical service