



## **Evaluation of possible climatological effects on sudden cardiovascular death cases in Budapest**

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The rate of sudden death in Hungary is traditionally high, compared to other EU countries. This phenomenon is related to high stress level, together with several socio-economic factors. In addition, the effect of extreme climate events may be also an important factor of human mortality. The main objectives of this study include the clarification and description of the possible relationship between the sudden cardiovascular death cases occurred in Budapest (Hungary) and various meteorological parameters (e.g., frontal activities, heat waves, cold events, etc.). Detailed time series of these death cases have been collected and compiled for the period of 1960-2004 based on autopsy reports of the Department of Forensic Medicine, Semmelweis University. Meteorological conditions during these sudden cases have been also collected from the ECMWF ERA-40 datasets, and the observations of urban meteorological station installed at the Department of Meteorology, Eötvös Loránd University. The most important meteorological variables have been evaluated using multi-discriminant analysis. The entire database have been separated to several subsets by gender, age, specific cause of the sudden death, and detailed trend analysis has been accomplished on annual and seasonal scales.