

# **Mgr Angieszka Hawrylewicz-Łuka**

## **„ANALYSIS OF ACCIDENTAL SUDDEN CARDIAC ARREST FOR PATIENTS OVER 60 YEARS OLD IN THE AREA OF EMERGENCY AMBULANCE SERVICE IN SIEDLCE”**

### **SUMMARY**

According to the World Health Organization in 2016, the main cause of death in the age group of people over 60 there was coronary heart disease in Europe [1]. However, the clinical condition in which the mechanical activity of the heart muscle is stopped and, as a consequence, blood circulation in the body stops, is sudden cardiac arrest. It requires immediate cardiopulmonary resuscitation in order to obtain the return of spontaneous circulation in the injured person. NZK is considered to cause over 60% of deaths in adults with coronary heart disease and is thus the leading cause of death in Europe [2-4].

The subject of aging is currently one of the most important problem that concerns both developed and developing countries. According to the World Health Organization, people aged 60 and over are considered as elderly people. They constitute a special group of patients who are definitely susceptible to the occurrence of numerous health problems, diseases and injuries, and consequently require broadly understood care, long-term hospitalization or rehabilitation [5 - 9]. The aim of the study was to analyze sudden cardiac arrest in patients over 60 years of age in the area of the Emergency Service in Siedlce (Mazowieckie Voivodeship). The study was conducted on the basis of the analysis of Emergency Departure Order Cards and Medical Emergency Services Cards, medical documentation of Medical Emergency Teams in the area of operation of the Independent Public Health Care Center "RM Meditrans" Emergency Service Station and Sanitary Transport in Siedlce, i.e. the following poviats: Siedlce, Garwolin, Mińsk,

Sokołowski, Węgrowski and Łosicki, from January 1 st, 2013 to December 31st, 2017. For final analysis according to the criterion adopted in the study, i.e. patients with sudden cardiac arrest over 60 years of age, 3840 trips of Medical Rescue Teams from the area of the Emergency Ambulance were qualified in Siedlce, operational area 14-04. The following information was used from the medical records for the purposes of the analysis: date and time of receipt of the report, taking BLS by witnesses of the event, resuscitation by the Medical Rescue Team, effectiveness and duration of CPR, patient's sex, patient's age, travel time, place of call, place of incident , type of syndrome, baseline ECG rhythm, follow-up of the patient, the most frequently undertaken medical rescue operations and pharmacological measures. The obtained data from the analysis of Emergency Departure Order Cards and Medical Cards Emergency Activities of Medical Emergency Rescue Teams in Siedlce were collected in the Microsoft Excel database of the MS Office 2016 for Windows 10 package, and the obtained results were statistically analyzed using the STATISTICA 13 program (StatSoft, Cracow, Poland).

The following research problems were posed at work:

- What is the main mechanism of sudden cardiac arrest in patients over 60 years of age in the area of emergency service in Siedlce?
- What are the most common medical emergency services undertaken by Medical Rescue Teams for SCA in patients over 60?
- What pharmacological agents are most often used for patients with sudden cardiac arrest after 60 years of age in the area of the Emergency Service in Siedlce?
- What factors influence cardiopulmonary resuscitation?
- What factors influence the return of spontaneous circulation in patients over 60 years with sudden cardiac arrest?
- What factors influence the performance of medical rescue operations in patients over 60 years with NZK in the area of the Emergency Service

in Siedlce?

My own research shows that asystole was the main mechanism of sudden cardiac arrest in patients over 60 years in the area of the Emergency Service in Siedlce.

Intravenous access, endotracheal intubation and oxygen therapy are the most common medical emergency services undertaken by Medical Rescue Teams for SCAs in patients over 60 years of age. The ECG rhythm, the patient's age and the time of the call have an impact on the performance of medical emergency services in patients over 60 years of age with NZK in the area of the Emergency Service in Siedlce.

Fluid therapy and Adrenaline are the most commonly used drugs in patients with sudden cardiac arrest after 60 years of age in the area of the Emergency Service in Siedlce.

Factors that affect cardiopulmonary resuscitation are the time of the call, the year of the study, the age of the patient, the place of the call, the place of the incident, the type of Emergency Medical Services and the reason for the call.

Patient's age, year of examination, day of the week, place of call and place of the event, time of reaching the patient, duration of resuscitation, type of EMR, reason for calling, resuscitation by witnesses of the event, baseline ECG rhythm, administration of Adrenaline, Amiodarone and Dopamine and the performance of the following medical rescue operations are factors that contribute to achieving spontaneous circulation in patients over 60 years of age with sudden cardiac arrest in the area of the Emergency Service in Siedlce.

It is necessary to conduct further research on pre-hospital care provided by Medical Rescue Teams for persons over 60 years with sudden cardiac arrest in order to provide the best care to the elderly who are in a danger to their lives, and at the same time improving the quality of services provided by Medical Rescue Teams.