The outcomes of resuscitation after out-of-hospital cardiac arrest in Croatia

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Purpose of the study: To determine the rate of return of spontaneous circulation (ROSC) in attempted resuscitation after out-of-hospital cardiac arrest (AR-OHCA) in one year period in the Varaždin County, (175.951 inhabitants); the rate of bystander cardiopulmonary resuscitation (CPR), and the impact of airway management strategy upon ROSC.

Materials and methods: Cross-sectional analysis of Utstein Style Forms in The Institute of Emergency Medicine – Varaždin County, between January 1, 2018, and December 31, 2018.

Results: There were a total of 97 AR-OHCA, 63 male, (64,9%), 24-88 years of age, median 70. ROSC was achieved in 21 patient, (21,6%). The bystander CPR was performed on 61 patient, (62,9%). The initial rhythm was shockable (VF only) in 25 (25,8%). In the VF group, ROSC was achieved in 9 out of 25 patients (36%), and in the initial non-shockable rhythm group (PEA and ASY) in 12 out of 72 patients, (16,7%), OR 2.81, 95% CI 1.01 to 7.84. All of the patients had secured airway, 28 with endotracheal intubation (ETI), (28,9%), and 69 with I-gel, (71,1%). In the ETI group, ROSC was achieved in 8 out of 28 patients (28,6%), and in the I-gel group in 13 out of 69 patients (18,8%), OR 1.72, 95% CI 0.62 to 4.77.

Survivorship related to initial cardiac rhythm

Survivorship related to how the airway is secured

Conclusions: The rate of ROSC in AR-OHCA (21,6%) is lower than the European, while the bystander CPR rate (62,9%) is higher. We found an association between initial shockable rhythm and ROSC, which is consistent with previous studies. The airway management strategy in our study seems to be in favor of ETI, but the difference is not statistically significant.

Reference:

Gräsner J-T, Lefering R, Koster RW, et al. EuReCa ONE-27 nations, ONE Europe, ONE registry: a prospective one month analysis of out-of-hospital cardiac arrest outcomes in 27 countries in Europe. *Resuscitation*. 2016;105:188–195.