Cardiac arrest

ABSTRACT WITHDRAWN

Cardiac arrest

USING A VENTILATOR DURING CARDIAC ARREST IMPROVES PCO2. STARTING SYMEVECA STUDY

A Hernández-Tejedor*, NV González, E Corral, A Benito, M Vázquez, R Pinilla, SI Montero, F Torres, M Elizondo. SAMUR-Prottección Civil, Madrid, Spain

10.1136/bmjopen-2022-EMS.20

Background Ventilation affects the internal environment and intrathoracic pressures. Current recommendations suggest the use of mechanical ventilators in non-traumatic out-of-hospital cardiac arrest (OHCA) but their use is not widespread. We aim to compare gasometric parameters depending on the method for mechanical ventilation during OHCA.

Method Quasi-experimental study including all patients in OHCA attended by an EMS in a 9-month period with persistence of OHCA three minutes after early intubation. Two groups are established according to the method of ventilation during OHCA (ventilator in IPPV 500 ml x 12 rpm or resuscitation balloon). Demographic variables, initial rhythm, blood gas parameters 15 minutes after intubation or upon recovery of spontaneous circulation (ROSC) -whatever occurs first- and hospital complications were recorded. Continuous variables as mean ± standard deviation. Statistical analysis: comparisons of parametric techniques. Study approved by our ethics committee.

Results 167 PCEH were registered but 91 were excluded due to very early recovery (35) or violation of analysis protocol (56). Women 21%, age 63±19 years, shockable rhythm 31%. Groups were analyzed according to ventilation: IPPV (32) or resuscitation balloon (44). In patients with an arterial sample: pH 6.99±0.17 vs 6.99±0.16 (p=0.99); pCO2 67.9±18.8 vs 100.8±60.5 mmHg (p=0.13). With a venous sample: pH 7.01±0.17 vs 6.96±0.16 (p=0.28); pCO2 68.6±25.5 vs 86.5±25.0 mmHg (p=0.01), respectively. No direct ventilator-related complications were registered.

Conclusion Ventilation with a mechanical ventilator during OCHA improves ventilatory status compared to the use of a resuscitation balloon. The target sample size has not yet been reached. There were no direct complications. After completing the first phase, a second one will begin, comparing different ventilatory modes.

Conflict of interest None declared.

Funding A. J. Jørgensen receives an unrestricted research grant from the private foundation TrygFonden.