

E-PEDCARE: first results of an international prospective registry of pediatric Out-of-Hospital and Emergency Department Cardiac Arrest.

PURPOSE OF THE STUDY. Knowing the characteristics and outcomes of pediatric Out-of-Hospital and Emergency Department Cardiac Arrest (CA).

MATERIALS AND METHODS. Prospective multicenter study (65 hospitals, 6 countries) of Out-of-Hospital CA (OHCA) and Emergency Department CA (EDCA). We used Utstein Style, focussing on epidemiology and variables associated with survival and neurological outcomes. We describe the preliminary results from 1st Jun 2014 to 15th Dec 2015.

RESULTS. We have analysed 75 CA, 12 of them were EDCA. The median age was 3.6 years (interquartile range 1.1-9.1), 57.3% male. The CA happened at home (40%), street (14,7%), school (4%), sports ground (2.6%) and other places (38,7% mainly ED and ambulance). Etiology: presumed cardiac (21.3%), trauma (16%), respiratory (17.4%), drowning/submersion (17.3%), other non-cardiac (13.3%) and unknown (14.7%). There was a bystander in 45.3%. However, “phone resuscitation” was started in only 17.3%. The most frequent initial rhythm was asystole (56% CA), followed by bradycardia (21.3%), ventricular fibrillation (6.7%), pulseless electrical activity (4%), pulseless ventricular tachycardia (4%) and unknown rhythm (8%). The most frequent known rhythm before return of spontaneous circulation was asystole (17/75, 22.6%) followed by bradycardia (7/75, 9.3%).

- Outcomes in 63 children with OHCA: ROSC in 45/63 (71.4%) and sustained ROSC in 38/63 (60.3%). 22 have been discharged: 10/63 (15.8%) with paediatric overall performance category (POPC) 2, one with POPC 2, 6 with POPC 3, 2 with POPC 4 and 1 with POPC 5, the rest were missing patients.
- Outcomes in 12 patients with EDCA: ROSC in 9 and sustained ROSC in 5, of whom 3 children survived to discharge (1 with POPC 3 and 2 with POPC 1) and 1 was a missing patient.

CONCLUSIONS. Our preliminary results of the E-PEDCARE registry demonstrate higher OHCA and EDCA survival (with acceptable to good neurological outcome) than previously reported. Continuous efforts are needed in order to know which variables are associated with better outcomes of CA in children.