



Epidemiology and Outcomes of Traumatic Out-of-Hospital Cardiac Arrests (OHCA)

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PURPOSE OF STUDY

Traumatic OHCA has a very grave prognosis and most will regard attempted resuscitation as futile.

This study aims to describe the characteristics and outcomes of traumatic OHCA.

MATERIALS AND METHODS

This is a retrospective case record review.

Inclusion criteria included all patients who suffered a traumatic OHCA conveyed by emergency medical services (EMS) to our Emergency Department (ED) from 1st Aug 2012 to 31st Aug 2014.

Exclusion criteria included patients declared dead at scene.

Data collection followed Utstein style. EMS data were extracted from National Cardiac Arrest registry. Data of patients admitted were extracted from inpatient electronic case records.

All OHCA were conveyed by EMS to Emergency Departments for continued care. Paramedic are trained in advanced life support (ALS).

RESULTS

Between August 2012 and August 2014, our ED received 888 OHCA of which 16 (1.8%) had a traumatic etiology. The median age (IQR) of traumatic OHCA was 50 (21-79) years and 13 (81%) were males. 6 cases were not witnessed, 7 witnessed by layperson, and 3 by EMS ambulance. 2 received bystander cardiopulmonary resuscitation (CPR). None had bystander automated external defibrillator (AED) applied. 12 (75%) cases happened in the daytime (0800-1959hrs).

The first presenting rhythms by EMS were 6 asystole, 8 pulseless electrical activity (PEA), 1 VT and 1 VF. EMS attempted defibrillation in 2; 10 laryngeal mask airway (LMA) inserted; 3 received adrenaline. All patient was conveyed to our ED.

In ED, 11 had asystole and 5 PEA as first rhythm. None received defibrillation. 15 (94%) were intubated by endotracheal tube (ETT). 15 (94%) received further doses of adrenaline. None received additional drugs (atropine, amiodarone, bicarbonate, lidocaine). 3 had return of spontaneous circulation (ROSC). None had targeted temperature management (TTM). 15 (94%) died in ED. 1 admitted to hospital, subsequently died in hospital.

CONCLUSION

Prognosis for traumatic OHCA was dismayed, regardless of EMS initial presenting rhythm.