

POSTER PRESENTATION

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An observational study of post cardiac arrest management at a uk tertiary intensive care unit between 2010 and 2012

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Introduction

Patients surviving cardiac arrest account for 5.8% of all UK ICU admissions¹. Analysis of the Intensive Care National Audit and Research Centre Case Mix Programme Database (ICNARC CMPD) found that 42.9% of patients admitted after cardiac arrest survived to ICU discharge, and 28.6% survived to hospital discharge. Of these 79.9% returned directly home¹.

Objectives

To see if our outcomes were comparable to published data and to audit care against the UK Intensive Care Society (ICS) guidelines².

Methods

Data was collected from our ICU electronic information system, including cardiac arrest in or out of hospital (IHCA/OHCA) and initial cardiac rhythm, either Ventricular Fibrillation/Tachycardia (VF/VT) or Asystole/Pulseless Electrical Activity (PEA). We recorded implementation of the ICS Post Cardiac Arrest Care Bundle, comprising; coronary reperfusion, haemodynamic optimisation, control of ventilation, blood glucose, temperature and seizures. Hospital survival and discharge data were collected from the electronic hospital discharge database.

Results

161 patients were admitted post cardiac arrest between January 2010 and December 2012. 6 patients were excluded due to incomplete data. There were 60 IHCA, 65% male (mean age, 68 years) and 35% female (mean age, 61 years) and 95 OHCA, 69% male (mean age, 66 years)

and 31% female (mean age, 70 years). Comorbidities included cardiovascular (36%), gastrointestinal (20%) and drug/alcohol abuse (17%).

The predominant rhythm was VF/VT (56%) in OHCA and Asystole/PEA (65%) in IHCA. 98% of patients were mechanically ventilated and 79% required haemodynamic optimisation with inotropic agents. Adequate blood glucose control was achieved in 72% of patients. Primary PCI was performed in 20% VF/VT OHCA. Cooling was achieved in 78% of VF/VT OHCA compared to 24% of VF/VT IHCA.

58% of the cohort died during hospital admission, 86% during their ICU stay. However 42% went on to survive to hospital discharge, 78% of whom were discharged home (33% of all patients admitted). The best outcome was seen in VF/VT IHCA and VF/VT OHCA; 62% and 50% respectively survived to hospital discharge. In VF/VT IHCA 77% of hospital survivors were discharged home compared to 81% in VF/VT OHCA. Poorest outcome was observed in PEA/Asystole OHCA where 27% survived to hospital discharge.

Conclusions

Comparing our population to the ICNARC CMPD data, survival to hospital discharge (33% vs. 28.6%) and subsequent discharge home (78% vs. 79.9%) were comparable. Adherence to the ICS bundle of care was well achieved overall. The poorest component of the bundle was provision of primary PCI for OHCA VF/VT.

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