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OUT OF HOSPITAL CARDIAC ARREST: THE RESULTS OF THE HEART ATTACK TEAM IN THE FIRST YEAR

J Webb, M Moore, S Calvert, N Al-Subaie, P Lim *St George's Hospital*

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Introduction Historically patients who presented following an Out of Hospital Cardiac Arrest (OHCA) of presumed cardiac origin had dismal survival data with concerns that survivors would have poor neurological outcomes. In recent years there has been increased focus on prehospital care and coordinated care once patients arrive in hospital, including urgent percutaneous coronary intervention (PCI) and targeted temperature management (TTM). In our unit we have a multi-disciplinary heart attack team (HAT) in place that specialises in treating this challenging patient population by delivering the patients directly to our cardiac catheter laboratories and then to intensive care where they have TTM in addition to standard intensive care.

Methods This is a retrospective observational study looking at the outcome of consecutive OHCA patients who were managed by the HAT and presented to our institution over a period of 1 year. The HAT was formally introduced in July 2011. We focused on survival, neurological status on hospital discharge using the cerebral performance scores (CPC), length of stay (LOS) in cardiothoracic ITU (CTITU) and in hospital and activity in the coronary catheter lab notably door to balloon times (DBT) for PCI. Data were derived from hospital notes, electronic records and ambulance sheets.

Results A total of 53 patients presented directly to our institution following an OHCA of presumed cardiac origin. The mean age was 61 years (SD 14 years) with 75.5% male. 36 patients (67.9%) survived to hospital discharge with a mean age 59 years (SD 15 years) and 73% male. 30 patients had ST elevation or LBBB on their presenting ECG. 30 patients (83.3%) were discharged with no significant neurological impairment, CPC 1 and 2. 6 patients were discharged with neurological impairment, CPC3; there were no patients in CPC4. The median LOS on CTITU was 4 days (IQR 6.5 days) and for the survivors the median LOS was 5 days (IQR 7.4 days). The hospital LOS for all patients was 11 days (IQR 13.4 days) with the median LOS in hospital for survivors 16 days (IQR 13.5 days). 49 patients (92.5%) had urgent angiography with

29 patients proceeding to successful PCI (59.2%) and 5 patients (10.2%) referred for CABG with three vessel disease. The median DBT for these patients was 49 min (IQR 31 min), with the survivors having a median DBT 46 min (IQR 30 min). 7 patients (19.4%) were discharged from hospital with an ICD.

Conclusions The survival of OHCA patients presenting to our cardiac unit compares favourably with published data. We believe these outcomes are a result of our successful heart attack team which enables us to deliver high rate of urgent coronary intervention and aggressive intensive care therapy including targeted temperature management.