

Audit Outcome Cardiac Arrest Cases (2019-2020) in Emergency Department RIPAS Hospital, Brunei Darussalam

Authors : Victor Au, Khin Maung Than, Zaw Win Aung, Linawati Jumat

Abstract : Background & Objectives: Cardiac arrests can occur anywhere or anytime, and most of the cases will be brought to the emergency department except the cases that happened in at in-patient setting. Raja Isteri Pangiran Anak Saleha (RIPAS) Hospital is the only tertiary government hospital which located in Brunei Muara district and received all referral from other Brunei districts. Data of cardiac arrests in Brunei Darussalam scattered between Emergency Medical Ambulance Services (EMAS), Emergency Department (ED), general inpatient wards, and Intensive Care Unit (ICU). In this audit, we only focused on cardiac arrest cases which had happened or presented to the emergency department RIPAS Hospital. The objectives of this audit were to look at demographic of cardiac arrest cases and the survival to discharge rate of In-Hospital Cardiac Arrest (IHCA) and Out-Hospital Cardiac Arrest (OHCA). Methodology: This audit retrospective study was conducted on all cardiac arrest cases that underwent Cardiopulmonary Resuscitation (CPR) in ED RIPAS Hospital, Brunei Muara, in the year 2019-2020. All cardiac arrest cases that happened or were brought in to emergency department were included. All the relevant data were retrieved from ED visit registry book and electronic medical record "Bru-HIMS" with keyword diagnosis of "cardiac arrest". Data were analyzed and tabulated using Excel software. Result: 313 cardiac arrests were recorded in the emergency department in year 2019-2020. 92% cases were categorized as OHCA, and the remaining 8% as IHCA. Majority of the cases were male with age between 50-60 years old. In OHCA subgroup, only 12.4% received bystander CPR, and 0.4% received Automatic External Defibrillator (AED) before emergency medical personnel arrived. Initial shockable rhythm in IHCA group accounted for 12% compare to 4.9% in OHCA group. Outcome of ED resuscitation, 32% of IHCA group achieved return of spontaneous circulation (ROSC) with a survival to discharge rate was 16%. For OHCA group, 12.35% achieved ROSC, but unfortunately, none of them survive till discharge. Conclusion: Standardized registry for cardiac arrest in the emergency department is required to provide valid baseline data to measure the quality and outcome of cardiac arrest. Zero survival rate for out hospital cardiac arrest is very concerning, and it might represent the significant breach in cardiac arrest chains of survival. Systematic prospective data collection is needed to identify contributing factors and to improve resuscitation outcome.

Keywords : cardiac arrest, OHCA, IHCA, resuscitation, emergency department

Conference Title : ICEM 2022 : International Conference on Emergency Medicine

Conference Location : Bangkok, Thailand

Conference Dates : December 20-21, 2022