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Out of Hospital Cardiac Arrest in North Emirates (UAE)

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Objectives: To describe the characteristics of out-of-hospital cardiac arrest patients, who were treated and transported to hospitals by National Ambulance. This study represent the percentage of patients who had return of spontaneous circulation (ROSC) prior arrival to emergency departments in the emirates of Sharjah, Ajman, Ras-al-Khaimah, Fujairah and Umm Al-Quwain in united Arab emirate.

Methods: This is a prospective descriptive cohort study of out-of-hospital cardiac arrest cases transported by the national ambulance crews between July 2017 and June 2018 in the Northern Emirates. We report demography of incidence, sex, mean age, locations, witnessed cardiac arrests, bystander CPRs, presenting rhythms, pre-hospital shocks, advanced airway, medications and return of spontaneous circulation (ROSC) in the field.

Results: Number of patients included in this study was 715 patients. 77% (548) of patients were males and 23% (167) females. The median age of these patients was 50 years. Resuscitation and transportation was attempted by national ambulance for 95% (682) and 5% (33) were pronounced dead at scene.

Majority of victims was from Asian Nationalities 55.1% (394), Arabic people 35.2% (252), from the Arab 15.8% (113) were Emirati citizens. The lowest number of cardiac arrest patients were Europeans 2.2% (16) and Africans 3.2% (23). From the total OHCA cases 4.1% (30) their ethnicity were unknown. In this period most of victims had cardiac arrest in their home resident 66.7% (477), 19.3% (138) in the streets and public places and 6.1% (44) in workplace.

First step in chain of survival is early recognition of cardiac arrest, in north emirates 51.7% (370) cases were witnessed by bystander families, lay persons and bystander healthcare providers. Early bystander CPR is the second important step and it was performed for 27.5% (197) of the patients. Third step is early defibrillation and only 1.8% (13) had AED applied by bystanders before arrival of National Ambulance to the field. Non-shockable rhythms were the highest of the presenting rhythms 84.3% (603), for the shockable rhythms shock was delivered for 11% (80) by national ambulance crew. Advanced airway was used for 93% (670) of patients, as well as IV epinephrine administered for 44% (315). Prehospital return of spontaneous circulation (ROSC) for out of hospital cardiac arrest patients was 9.2% (66).

Conclusion: Our study illustrates out of hospital cardiac arrests in north emirates, 9.2% (66) had return of spontaneous circulation prior arrival to ED. More than a half of the cases were witnessed and recognized by bystanders, low rate of bystander CPR and access to public defibrillators was discovered. This study is essential to improve chain of survival implementation in UAE to reduce out of hospital cardiac arrest mortalities.

Biography:

Saad AlQahtani has completed his Master at the age of 26 years from Queensland University of Technology School of emergency and disaster medicine in Australia. He is the clinical researcher in National Ambulance UAE and Coordinator of Pan Asia resuscitation outcomes study in North Emirates. He has participated in many international projects in field of emergency and disasters.