

Investigating characteristics of patients and healthcare Visits Prior to Out-of-Hospital Cardiac Arrest in Two Tertiary Hospitals in Oman



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Introduction:

The high incidence of out of hospital cardiac arrest (OHCA) as well as its low survival rates are contributing to the burden on public health. Emerging evidence have recognized prodromal symptoms and patterns of healthcare use suggesting the possibility of predicting these cardiac events despite the general belief that they are merely sudden. Our study aimed to identify the characteristics of patients who present in OHCA and the utilization pattern of healthcare facilities by these patients in the period preceding the cardiac arrest.

Methods:

This is a retrospective study which included adult OHCA patients who presented at two emergency departments (ED) in Muscat, Oman between 2016 and 2020. The ED visits that occurred within the six months preceding the arrest were investigated. Descriptive statistics and frequency tables were used to report the baseline characteristics of all patients. Associations were tested using chi-square test.

Results:

The final cohort consisted of 822 patients with mean age of 60.2 years. The male and female percentages were 65.7% and 34.3% respectively. Less than 10% survived to hospital discharge. About two thirds of all recorded ED visits occurred in the three months immediately before the arrest. A significant association was observed between the frequency of pre-OHCA visits and cardiopulmonary resuscitation (CPR) outcome among patients (P-value = 0.000004).

Conclusion:

Over a quarter of the cohort subjects have approached ED prior to the arrest. Patients are more likely to seek medical attention before the arrest complaining mainly of cardiac and respiratory symptoms. The chances of survival after receiving CPR were higher for those with higher number of visits prior to the arrest. Having a unified system to document and monitor frequent emergency presentations as well as demographics of the patients concerned will aid in the pattern recognition and prevention of OHCA in many subjects.