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G-72 Retrospective Analysis of Cardiac Arrest for the Last 15 Years in the King Khalid University Hospital (KKUH), Riyadh, Saudi Arabia

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Background: Cardiopulmonary Resuscitation (CPR) was introduced to Saudi Arabia in 1984 after the first CPR course organized by the American Heart Association (AHA) was conducted. In 1987, the Saudi Heart Association and CPR Committee were established and became the sole responsible agency for CPR activities in the Kingdom of Saudi Arabia.

Objective: to review and analyze the outcome of CPR activities and the factors affecting that outcome, and to identify its progress over the last 15 years at the King Khalid University Hospital (KKUH).

Methods: The policy and procedure for CPR was revised in 1988 and in 1991. Accordingly, the period of review was divided into four stages for review: Stage I: before 1983; Stage II: 1983–1987; Stage III: 1988–1991; and Stage IV: 1992–1997. The records of 3,613 patients who underwent CPR during this 15 year period were reviewed retrospectively, and the following data were abstracted: 1) type of dysrhythmia at the time of the arrest; 2) drugs used; 3) DC countershocks applied; 4) condition of the patient at time of the arrest (monitors used, intubation, mechanical ventilation at the time of the arrest); 6) response time of the CPR team to the patient; and 7) outcome.

Results: There was a progressive, general improvement in outcome over the four stages. Most of the cardiac arrest occurred in the general wards and critical care units. They mainly were due to cardiac and/or respiratory causes. The overall attendance of the members of the CPR team improved across the stages with excellent responses in Stage IV (9.7% to 98.8%). The most common dysrhythmias were asystole and bradycardia (74%). Most of the patients, who arrested in Stage IV, had an intravenous line inserted during the time of the arrest (69.2%). Adrenaline and atropine were the drugs most frequently used in each of four stages. The use of bicarbonate and calcium solutions decreased across the successive stages. The use of DC countershocks blindly and without the prior use of drugs increase over the stages and paralleled an increased in the effectiveness of the DC shocks.

Conclusion: Based on these data, recommendations for further improvements in the outcome of CPR in KKUH include: 1) inclusion of a senior medical member in the CPR team; 2) emphasizing the blind use of DC countershocks; 3) avoiding the use of bicarbonate and calcium solution; and 4) frequent revisions of the policy and procedure for CPR at KKUH.

Keywords: arrest; cardiac; cardiopulmonary pulmonary resuscitation (CPR); countershocks; dysrhythmias; outcome; pharmacological interventions; process; review

G-73 Factors Influencing Survival after Out-of-Hospital Ventricular Fibrillation (OHVF) Cardiac Arrest in Japan

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Introduction: In 1991, a new Emergency Medical Services (EMS) system was introduced in which ambulance crews with special training were certified to provide defibrillation using a semiautomatic defibrillator for treatment of patients with ventricular fibrillation in the out-of-hospital setting (OHVF). According to the national report of the Japanese Ministry of Home Affairs, 1,918 cases of OHVF were treated with defibrillation by ambulance crews in 1996, and the number has been increasing by approximately 20% every year.