POSTER 11-19

1993 Call-Response and Call-Defibrillation Interval for Auckland Ambulance

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Purpose: To prospectively record the "call-response interval" (CRI) and "call-defibrillation interval" (CDI) for all cases in ventricular fibrillation (VF) in the Auckland Ambulance Service in 1993. Only primary cardiac cases were considered. The CRI is the time interval between when the call was received by dispatch center and the ambulance arriving at the location. The CDI is the time interval between when the call is received and the time point of the delivery of the first DC shock, if the patient was in VF when the defibrillator arrived
Methods: Cases of cardiac arrest were stored on a computerized database. Ambulance time points are transmitted by radio and recorded by the computer-aided dispatch system. All paramedic ambulances are equipped with Life-Pak 10 defibrillators (PhysioControl, Redmond, Wash.). Each defibrillator clock is set weekly by standard procedure against the dispatch center computer clock. Time of first shock (if the patient is in VF) is recorded on the ambulance officer report form (AOR). It is also recorded on the "code summary" in the defibrillator record. Medical audit aims to ensure completion of cardiac arrest data on the AOR.
Results: The 299 VF cases on defibrillator arrival had median CRI of seven minutes (range 2–31 min), median CDI 10 min. The 39 survivors to hospital discharge had median CRI of 6 min (range 3–23 min), median CDI = 10 min. The 120 cases not resuscitated and not transported had median CRI of 7 min, and a median CDI of 11 min.
Conclusion: Systematic recording of CRI and CDI is practical. On average, it took four minutes from vehicle arrival on location to delivery of the first countershock Cases not resuscitated did not have a longer CRI or CDI.

POSTER 12-20

Needs Assessment for Prehospital Pharmacological Therapy of Atrial Fibrillation and Flutter

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Purpose: To assess the need for prehospital pharmacological treatment of rapid atrial fibrillation or flutter to prevent cardiac ischemia.
Methods: During a 30-month period, advanced life support patients with an initial rhythm of atrial fibrillation or flutter were analyzed by vital signs, outcome, and admitting and discharge diagnosis.
Setting: Nonurban EMS system with population of 148,000.
Results: From 1 January 1991 through 30 June 1993, there were 13,945 total calls with 10,724 treated patients. Of these, 576 were identified as having either atrial fibrillation (566) or atrial flutter (10). Of these, 85 were potential candidates for pharmacological therapy (blood pressure >90 mmHg systolic and a pulse of >120/min). Only eight of these patients were identified as having ischemic heart disease, and only one of seven deaths was due to ischemic heart disease. Paramedics identified 18 of the 85 patients as having suspected myocardial ischemia. Five of these patients had ischemic heart disease, including one of the patients that died.
Conclusions: Nonhypotensive prehospital patients with atrial fibrillation/flutter, rapid ventricular response, and myocardial ischemia are uncommon; they account for less than 1% of patients treated. ALS providers have poor specificity in detecting myocardial ischemia. The pharmacological treatment of non-hypotensive atrial fibrillation with rapid ventricular response would not seem to be warranted in the prehospital environment.

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