Long Term Survival Rates and Predictors after Cardiopulmonary Resuscitation in Tertiary Care Hospital, Thailand

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Background: Cardiopulmonary resuscitation (CPR) is potentially an important life saving intervention. There are several poor predictors of CPR outcomes associated with survival rate and functional status. There is a paucity of long term survival data in Thailand.

Objective: (1) To assess survival rates of in-hospitalized cardiac arrest survival at one year after cardiac arrest. (2) To determine predictors associated with death at one year following cardiac arrest of long-term survival among patients with in-hospital cardiac arrest (IHCA).

Method: A retrospective study of medical and CPR record forms was reviewed in all patients who had cardiac arrest in Srinagarind Hospital from January 2013 to December 2014. The study included all cardiac arrests, which occurred in Srinagarind Hospital among those aged 18 years or older. Clinical outcomes of interest and survival at discharge during one year after hospitalization were reviewed. Descriptive statistics and survival analysis were used to analyze the outcomes.

Results: From January 2013 to December 2014, there were 202 adults who received in-hospital CPR. The overall rate of survival for in-hospitalized cardiac arrest at immediate arrest (ROSC), discharge, 7 days, and 1 year after cardiac arrest were 58%, 23%, 17%, 7.9%, respectively. Pre-arrest serum HCO3 < 20meq/l, asystole, urine less than 800 cc/day, post-arrest coma, and absence of pupillary reflex were predictors of death.

Conclusion: The survival rate of in-hospitalized cardiac arrest is 23% at discharge and 7.9% at first year after discharge. Independent Factors predicting survival at first year include serum HCO3 < 20 meq/l, asystole, urine <800cc/day, post-arrest coma, and absence of pupillary reflex.

Keywords: In-hospital cardiac arrest, IHCA, Cardiopulmonary resuscitation, Tertiary care hospital