Core 4. Heart Rhythm Disorders and Resuscitation Science

Session Title: Cardiopulmonary Resuscitation Quality and Performance

Abstract 18041: The Impact of Bystander CPR on Defibrillation-Survival curve in Out-of-hospital Cardiac Arrest From All-Japan Utstein Registry Data

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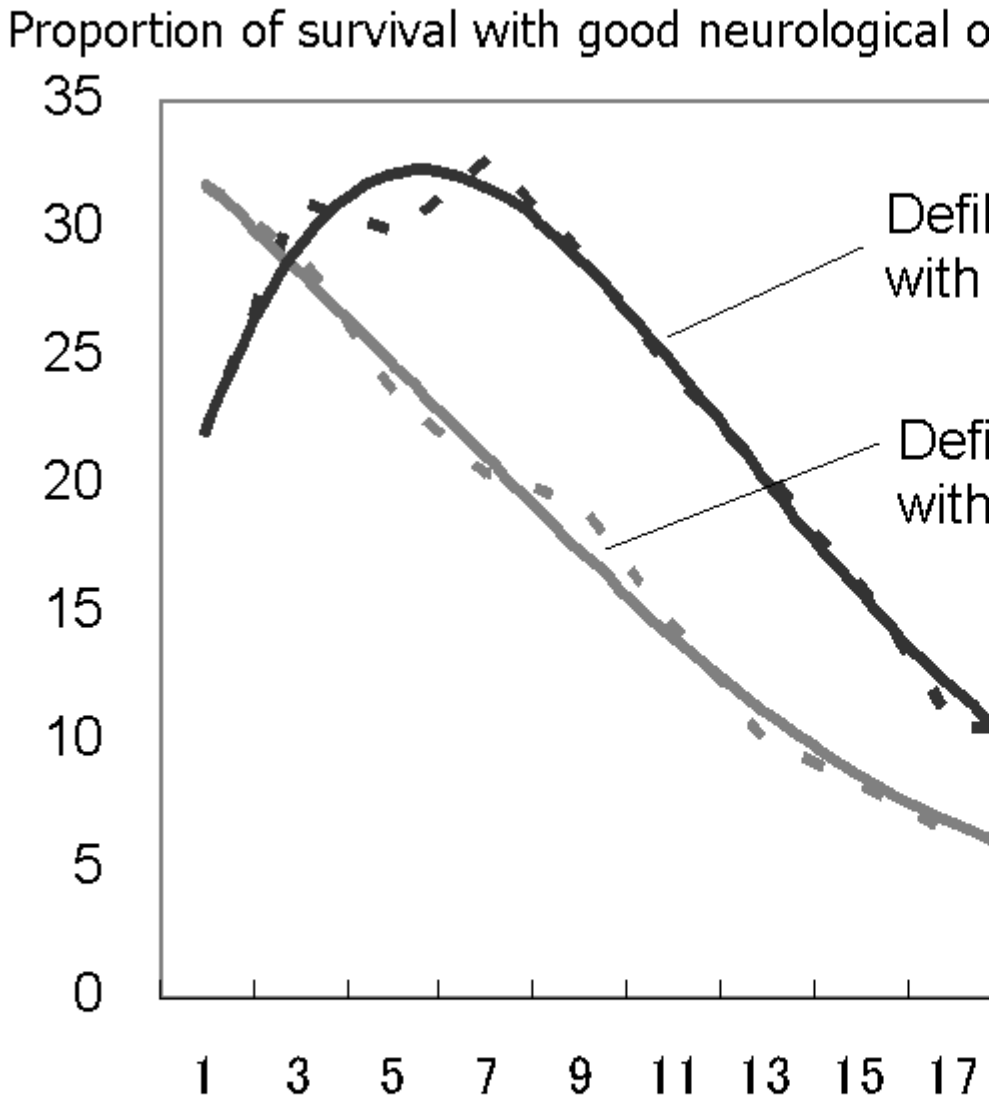
[Background] The study objective was the effect of time to chain of survival from out-of-hospital cardiac arrest. Several studies had the effects of them on survival from sudden cardiac arrest. These studies were estimated from medium sample size before guideline 2005.

[Method] We used All-Japan Utstein Registry of the Fire and Disaster Management Agency with a prospective, population based, involving consecutive patients with an out-of cardiac arrest with witness with layperson, over 18 years, from April 1, 2006 to December 31 2009. The primary outcome measure was survival and good neurological outcome; CPC 1 or 2. We evaluated the effect and described the relationship of intervals from collapse to defibrillator with or without bystander CPR for the outcome.

[Results] 19993 adults were included in the analysis. The medium time to bystander CPR was 2 minutes. The medium time to defibrillation was 12 minutes (Figure). Adjusted odds ratio of the average effect of interval from collapse to bystander CPR per a minute was 1.09 and 95% Confidence Intervals (CI) 1.07 to 1.11. Adjusted odds ratio of the average effect of interval from collapse to defibrillator with bystander CPR per a minute was 1.11 and 95%CI 1.10 to 1.12. Adjusted odds ratio of the average effect of interval from collapse to defibrillator without bystander CPR per a minute was 1.12 and 95%CI 1.11 to 1.14. The effect of time to defibrillator with bystander CPR was better outcome than the effect of time to defibrillator without bystander CPR.

[Conclusions] Proportion of survival with good neurological outcome cardiac arrest differently decreased with time that defibrillation with or without bystander CPR was delayed. Bystander CPR before defibrillation showed better neurological outcome and gained about 5 minutes to obtain the same proportion of the survival without bystander CPR. Our results suggest the effect of times to the chain of survival from

nationwide large population data.



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