Evidence-based Staffing Models are Required in the Contemporary Cardiovascular Intensive Care Unit: The Importance of Collaborating Cardiologists with Intensivists

[演者] 嘉嶋 勇一郎:1
[共同演者] 今村 浩:1, 桑原 宏一郎:2
1:信州大学 救急集中治療医学, 2:信州大学 循環器内科

Background: The contemporary cardiovascular intensive care unit (CICU) is a unit for complex cardiovascular critically ill patients with major systemic non-cardiovascular complications. CICU physicians are required the advanced knowledge and skills of critical care, including respiratory failure, acute renal failure, sepsis, nutrition, and delirium, that is not in the realm of common experience for cardiologists. Currently, some emergency departments (EDs) have formed CICU capable of providing aggressive cardiovascular critical care from ED care. This "ED-CICU" facilitates implementation of the best clinical practices in critical care by collaborating cardiologists with intensivists. However, few may have already begun to use ED-CICU and the benefits of ED-CICU remain unclear. Therefore, we investigated the outcomes in our ED-CICU. Methods and Results: Prognosis of patients with out-of-hospital cardiac arrest (OHCA) or cardiogenic shock was investigated. 1-month survival and survival with favorable neurological outcome of witnessed OHCA were good at 13.0% and 9.3% (nationwide average, 11.3% and 7.0%), respectively. Among patients with VF/VT who had favorable neurological outcome, 16% and 13% had return of spontaneous circulations after hospital arrival and after receiving extracorporeal cardiopulmonary resuscitation, respectively. In OHCA patients transferred by ambulance or helicopter with a doctor, 21% and 28% had good neurological outcome, respectively. Cardiogenic shock patients complicated with severe respiratory failure were managed using nitric oxide, prone position, or extracorporeal membrane oxygenation with
intensivists. Conclusions: Greater complexity of the environment in the contemporary CICU necessitates evidence-based staffing models that are adaptable to systemic non-cardiovascular complications. ED-CICU, a multidisciplinary approach collaborating cardiologists with intensivists, is feasible for the contemporary CICU and contributes to favorable outcomes.

[Keywords] cardiopulmonary resuscitation / shock