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• 英文摘要

- •計畫中文名稱 網路化之資料管理暨診斷系統在重症醫學之應用(II)
- 計畫英文名稱 Web-Based Data Management and Diagnosis System in Critical Care Medicine

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The important purpose of this study is to design an online monitor system for the resuscitation of traumatic shock at the trauma intensive care unit. The trauma critical care presents a variety of challenges. The major causes responsible for the mortality in the 1st hour are head injury and hemorrhagic shock from thoracic vascular injury, and that for late mortality is multiple organ failure. One of the key factors for the progression from the initial tissue injury and hemorrhage to multiple organ failure is persistent tissue ischemia, which leads to death finally. It can't be emphasized enough that to deliver an early and adequate resuscitation is very important to decrease the mortality and morbidity of major trauma patients. The physiological signals, including arterial blood pressure ABP , heart rate and arterial oxygen saturation, are the common monitoring for the critical illness. However, they can't simply reflect the adequacy of tissue perfusion and oxygenation. Venousoxygen saturation SVO2 , arterial lactate concentration, and pH can indicate the shock status, though, they have the shortcomings such as time delay, cost consideration, influence by organ reserve and easy contamination by the clinical treatment. But, the traumatic patients usually accompany other complications and clinical treatments. In the initial stage, the study takes the simple model which is total knee replacement TKR operation to avoid the uncontrollable factors which will influence the experiment.