

中文題目：加護病房重症病患之急性腎衰竭

英文題目：Acute kidney injury by KDIGO criteria in critical ill patients

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Background: Acute kidney injury (AKI) is a common problem in intensive care unit. A definition and grading system of acute kidney injury were introduced by the Kidney Disease: Improving Global Outcome (KDIGO) in 2012. We conducted a prospective observational study to observe the diagnosis of AKI at different time point and evaluate the progression of AKI by KDIGO AKI criteria in the ICU patients.

Materials and methods: The study included all patients who were older than 18 years and admitted from the emergency department to the ICUs from Jan. 1, 2013 to Jun. 30, 2014. The urine output data were calculated and averaged with a moving window of six hours. The urine output and following change of creatinine level were retrieved in the first two weeks of ICU stay. The acute kidney injury staging was determined by KDIGO criteria at the 48 hours, seven days and two weeks after ICU admission.

Result: From Jan. 1, 2013 to Jun. 30, 2014, there were 1125 patients were included for analysis. (Figure 1) The median age was 71.9 years old. The mean APACHE II score was 18.5, and the overall hospital mortality was 21.2%. We summarized the AKI progression and distribution in figure 2. Hospital mortality was increasing according to the severity of AKI. The half of patient without AKI discharged from ICU in the first seven days. The half of the rest progressed to AKI. Patients with stage 1 AKI had similar discharge rate as patients without AKI. One-fourth of the resting patient with stage 1 AKI progressed to more severe AKI. Fewer patients with severe AKI (stage 2 and 3) could be discharged from ICU.

The incidence of AKI in the whole study group was 59% on day 2. The percentage of patients with AKI elevated to 79.6% on day 7 in 490 patients. Almost ninety percent of patients who stayed in ICU longer than 14 days were diagnosed as AKI by KDIGO criteria (89.5% in 220 patients).

Conclusion: AKI is ubiquitous in ICU care, and the hospital mortality is proportional to the severity of AKI.