Rhabdomyolysis and Acute Renal Failure in Emergency ICU

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Introduction: The mechanisms involved in rhabdomyolysis are not fully understood.

Method: The outcomes, the cause of death, complications, and treatment methods were reviewed for 64 patients with rhabdomyolysis cases and compared with those of 242 patients with acute renal failure (ARF) in an emergency intensive care unit (ICU).

Results: The mortality rate for the patients with rhabdomyolysis was 1.6%, while that for the ARF cases was 35.5%. Only one of the patients with rhabdomyolysis died due to acute respiratory failure. The complications accompanying ARF included: intracranial hypertension, adult respiratory distress syndrome (ARDS), circulatory instability, sepsicaemia, and disseminated intravascular coagulopathy (DIC). While multiple organ failure appeared as a complication in many of the ARF cases, it appeared in only a few of the rhabdomyolysis cases. Due to the presence of circulatory instability, continuous methods (continuous hemodialysis, continuous hemofiltration, and continuous hemo-diafiltration) were used in 116 of 142 ARF cases (81.7%) requiring blood purification. Of the 31 rhabdomyolysis cases requiring blood purification, 17 were treated successfully with conventional hemodialysis only. Aggressive fluid replacement during the early stage of acute renal failure accompanying rhabdomyolysis resulted in fewer cases progressing into chronic renal failure or death.

Conclusion: Rhabdomyolysis often is accompanied by renal dysfunction. However, the effects are not as severe as those with ARF. Moreover, the rhabdomyolysis cases developed fewer and less severe complications than did those with ARF. Rhabdomyolysis now is treated in this hospital with comparative ease.

Keywords: acute renal failure; chronic renal failure; complications; fluid administration; hemodialysis; hemo-diafiltration; hemofiltration; mortality; purification; rhabdomyolysis

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