

Poster Abstracts

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AMPHETAMINE-INDUCED RHABDOMYOLYSIS AND MYOGLOBINURIC ACUTE RENAL FAILURE: A CASE REPORT.

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Introduction: Amphetamine is one of the causes of drug-induced rhabdomyolysis. The clinical features of rhabdomyolysis range from muscle weakness to fulminant life-threatening acute renal failure. We reported a case of amphetamine-induced rhabdomyolysis and myoglobinuric acute renal failure.

Case Report: A healthy 23-year-old man, a prior amphetamine drug abuser, presented with agitated confusion with Glasgow Coma Scale of E2V3M4. Amphetamine urine screen test showed positive. Impaired renal function was noted, with serum creatinine level of 3.32 mg/dL (reference: 0.6~1.3). Elevated serum level of muscle enzymes was also noted, with myoglobin level of 11033 µg/L (reference: < 90). We prescribed normal saline hydration and alkalinization. On the 4th day, the serum level of myoglobin raised to > 100000 µg/L. In addition, the serum level of creatinine raised to 12.76 mg/dL and he developed acute pulmonary edema with respiratory failure. After 3 sessions of emergent hemodialysis, the pulmonary edema resolved gradually. Rhabdomyolysis with acute tubular necrosis was confirmed by renal biopsy examination. He received hemodialysis for 1 month. His renal function recovered, with serum creatinine level decreasing to 1.72 mg/dL. The condition of rhabdomyolysis also improved, with serum myoglobin decreasing to 98 µg/L. The hemodialysis was stopped later.

Discussion: Amphetamine abuse has been rising over the past decades. Symptoms of acute toxicity may be mild. However, critically ill patients may exhibit seizures, coma, and renal failure related to rhabdomyolysis. Patients with myoglobinuric renal failure require aggressive crystalloid administration to assure adequate urinary output. The use of urinary alkalinization is controversial but often recommended. Hemodialysis is reserved for cases of acute renal failure not responsive to standard supportive care.