

AKI DUE TO RHABDOMYOLYSIS IN NARCOTIC DRUG-USER PATIENT



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Background: medications, illegal drugs and toxins are the most frequent non-physical causes of rhabdomyolysis (RM). Acute kidney injury (AKI) is a serious and, sometimes, fatal complication of rhabdomyolysis; it occurs in about 8-20% of RM incidents. [1]

Case report – 47 old male patient came to our ER, unconscious with hypotensive state. We were told the patient was **a usual narcotic-drug user**. Vitals at the arrival were: blood pressure 68/40mmHg, HR 81bpm, spO2 92%, afebrile. Patient was **oligo-anuric, pupils were miotic**. The patient underwent to infusion therapy with saline solution and a vial of Naloxon 1mL/0.4mg was administered. Blood test showed: pH 7,186, HCO3 13,0, BE -16,7, pCO2 30.6mmHg, pO2 100%, sCr 7 mg/dL, serum blood urea 152 mg/dL, uricemia 9.1 mg/dL, Na 140 mmEq/L, K 3.9 mmEq/L, Ca 7.8 mg/L, P 5.5 mg/dL, CPK 14660 UI/L, LDH 1149 UI/L, GOT 304 U/L, GPT 287 U/L. Hb 14.7gr%, WBC 26000mmc, 240000mmc.

ECG showed aspecific changes on AV conduction and cardiac repolarization. Chest X-Ray showed pulmonary thickening in the middle pulmonary area. The patient was moved to our Nephrology Department and he underwent to central vein catheterization to start **CRRT with CVVHDF mode**.

CRRT was performed for 3 days (treatment was just interrupted to do CT scan, due to abdominal pain referred by the patients), dopamine was used to maintain adequate blood pressure; diazepam was administered in continuous to prevent withdrawal. Clinical condition slowly got better until the recovery of renal function with adequate urinary output (day 4) and normalization of blood pressure values.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9
blood urea mg/dL	152	138	139	88	88	59	152	142	122
sCr mg/dL	7	5.7	5.9	3.3	3.1	1.8	3.4	1,9	1,4
CPK UI/L	14660	16292	9682	2317	860	478	137	63	54
LDH U/L	1149	1454	1338	948		1135	872	660	531
CK-MB UI/L		280	226		44	42	17		14
Na/K mmEq/L	140/3.9	139/3.7	140/4.4	139/3.9	136/4.2	140/3.8	138/3.7		138/4.1
Ca/P mg/dL	7.8/5.5	7.5/4.8	9/5.3	8.4/2.8	8.9/2.8	9.8/1.7			9/2.2

Tab1. Blood test during the hospitalization.

Conclusion: AKI is one of the most severe complications of rhabdomyolysis. The initiation of RRT in clinical practice should be managed by the status of renal impairment, with life-threatening complications not-responding to clinical measures. In this case, CRRT represented the best therapy to treat AKI due to RM achieving the recovery of renal function.

[1] Acute kidney injury due to rhabdomyolysis in narcotic drug users, George Kosmadakis 1, Otho Michail, Vasileios Filiopoulos, Panoraia Papadopoulou, Spiridon Michail. PMID: 21786249 DOI: 10.5301/IJAO.2011.8509

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