

Baclofen Intoxication in Post Ischemic Patient Already on Dialysis Treatment: How Emergency Eemodialysis can Resolve Acute Renal Failure in a 50-Year-Old Man Case Report

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Background: Baclofen is a derivative of the neurotransmitter γ -aminobutyric acid (GABA) that acts on nervous system as GABA-agonist to treat pain and spasticity (muscle stiffness and tension). These conditions only mostly result from conditions such as multiple sclerosis, spinal cord injury, problems following brain events, or other diseases. By acting on spinal cord nerves, it reduces the number and severity of muscle spasms, also relieves pain and improves muscle movement.

Case History: A 50-year-old male patient presented to the emergency department with acute renal failure. He was already on biweekly dialysis treatment for chronic renal failure. He suffered from a previous cerebral ischemic event and subsequent muscle spasms due to which he was being treated with baclofen 25 mg twice a day. On admission he manifested several neurological features of baclofen toxicity (dizziness, weakness, headache, nausea, weak muscle tone, coma, respiratory distress). He was treated with emergency hemodialysis, recovering completely after two sessions.

Table

	Blood test at access	Blood tests at discharge
ALT	101.0 UI/L	54.0 UI/L
AST	30 UI/L	30 UI/L
GGT	114 UI/L	104 UI/L
LDH	-	212.0 UI/L
Red Blood Cells	4.29 x10 ³ UI/L	4.06 x10 ³ UI/L
Hb	12.9 g/dl	12.4 g/dl
White Blood Cells	12.58 x10 ³ UI/L	10.17 x10 ³ UI/L
Neutrophils	9.77 x10 ³ UI/L	6.56 x10 ³ UI/L
PCR	0.56 mg/L	1.9 mg/L
PCT	0.7 ng/ml	0.4 ng/ml

Creatinine	5.12 mg/dl	4.25 mg/dl
Urea	117 mg/dl	66 mg/dl
Sodium	141 mEq/L	143 mEq/L
Osmolarity	307.0 mOsm/L	315 mOsm/L
Potassium	5.5 mEq/L	4.6 mEq/L

Discussion: Baclofen is eliminated predominantly by the kidneys, putting patients with impaired renal function at a particular risk of accumulating baclofen. Several investigators have suggested that hemodialysis is effective in the removal of baclofen, although the pharmacokinetics of eliminating baclofen during hemodialysis remains unclear.

References

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