

## **Severe Viral Myositis from Influenza A Resulting in Refractory Hyperkalemia and Dialysis-Dependent Acute Kidney Injury**

**Authors and Affiliations: Kourtney W. Autin, PhD; Kristen Williams, MD; Leandre Millet, MD; Gina Suarez MD; Division of Nephrology and Hypertension, Department of Medicine, LSUHSC School of Medicine**

Presentation: 51-year-old female with past medical history of hypertension, hypothyroidism, hyperlipidemia, coronary artery disease and transient ischemic attack presented with primary complaint of bilateral lower extremity (BLE) heaviness that has been worsening for the past week. She reported associated shortness of breath, cough, and generalized myalgias. Patients stated that she tested positive for influenza A prior to onset of symptoms. Patient additionally reported mental fog and difficulty remembering events since influenza diagnosis. On exam, patient was alert and oriented to person and location with difficulty recalling events over the last week. Patient was unable to perform straight leg raise test against gravity with 2/5 strength in bilateral hip flexors. Patient was euvolemic on exam despite oliguria. Patient was found to have severe hyperkalemia (6.7) and BUN/Cr (160/22.77) which was significantly increased from her baseline renal function. Creatine kinase was elevated to 55,000. Patient was acutely treated with albuterol and insulin to shift potassium, however patient remained hyperkalemic to 6.2. She required emergent hemodialysis overnight. Patient subsequently required 3 additional hemodialysis treatments with slow recovery of baseline renal function. Patient's mentation has since improved.

Discussion: Influenza A is an uncommon but significant cause of viral myositis that can progress to fulminant rhabdomyolysis and acute kidney injury. This patient presented with progressive lower extremity weakness, cognitive changes, severe hyperkalemia, and markedly elevated creatine kinase, consistent with rhabdomyolysis-associated renal failure. Proposed mechanisms include direct viral muscle injury, immune-mediated myocyte damage, and myoglobin-induced acute tubular necrosis resulting in electrolyte derangements and uremia. Despite temporizing medical therapy, refractory hyperkalemia necessitated emergent hemodialysis, followed by additional treatments with gradual renal recovery. This case highlights the importance of early recognition of severe muscle injury in influenza infection and timely management to prevent life-threatening complications and support renal recovery.