COLCHICINE-INDUCED MYOPATHY WITH MYOTONIA

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Background: Acute gastrointestinal upset from the use of colchicine in the treatment of acute gouty arthritis is common. However, routine doses of colchicine may cause severe myopathy in patients with impaired renal function. Clinical or electrophysiological myotonia secondary to colchicine has very rarely been reported.

Patient: A 79-year-old man presented with progressive weakness especially in the muscles of his lower limbs for about ten days before admission. He was diabetic, hypertensive and had coronary arterial disease with congestive heart failure for many years. He also had chronic renal insufficiency with a serum creatinine of 1.9 mg/dL. He had been treated with colchicine for gouty arthritis for the past 25 days. Neurological examination revealed proximal muscles weakness of four limbs, more prominent in the legs than in the upper arms. His deep tendon reflexes were absent. Percussion myotonia was present in the thenar muscles.

Results: Laboratory evaluation demonstrated an increased level of serum creatine kinase (CK), lactate dehydrogenase (LDH) and aspartate aminotransferase (AST). Serum creatinine was 2.2 mg/dL. Electromyography revealed myopathy pattern and abundant widespread myotonic discharges in all muscles examined. Fibrillations and complex repetitive discharges were also widespread. Muscle biopsy findings showed prominent vacuolar formation in the myocytes. Electron microscopy revealed subsarcolemmal vacuoles containing multiple electron-dense lysosomal granules. After withdrawal of colchicine, marked improvement of his muscle strength occurred two weeks later.

Conclusions: Colchicine-induced myopathy associated with clinical and electrophysiological myotonia is very rare. Colchicine should be used with caution in elderly patients with chronic renal insufficiency.