The intent of this study was to evaluate the safety and efficacy of an intravenous (IV) potassium (K) dosing algorithm for hypokalemic critically ill trauma patients. Johnston et al (2015).

Abstract:

Purpose: The intent of this study was to evaluate the safety and efficacy of an intravenous (IV) potassium (K) dosing algorithm for hypokalemic critically ill trauma patients.

Methods: Adult patients, admitted to the trauma intensive care unit from June 2010 to October 2012 and who received IV K therapy according to a standardized dosing algorithm, were retrospectively evaluated. Patients who received IV K during resuscitation or following initiation of nutrition therapy, IV fluids containing >20 mEq/L of potassium, or medications known to alter K homeostasis or those with an arterial pH change >0.1, diarrhea, hypomagnesemia, renal impairment, or morbid obesity were excluded.

Results: In total, 715 patients were reviewed to obtain 100 evaluable patients. Serum K for patients with mild depletion (serum K, 3.5–3.9 mEq/L, n = 74) remained unchanged at 0.0 ± 0.3 mEq/L (P = ns) following 46 ± 8 mEq. Serum K increased by 0.4 ± 0.3 mEq/L (P = .001) following 78 ± 18 mEq during moderate depletion (serum K, 3–3.4 mEq/L). None of the
patients experienced hyperkalemia (serum K, >5.2 mEq/L) postinfusion. The presence of traumatic brain injury (TBI) blunted the response to IV K for mild K depletion as only 26% had an increase in serum K compared with 55% of patients without TBI (P = .025).

Conclusions: The Nutrition Support Service–guided IV K dosing algorithm was safe for patients with mild and moderate hypokalemia and efficacious for those with moderate hypokalemia. Further study in patients with severe hypokalemia (serum K,

Reference:


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