"The objective of this study was to evaluate the occurrence of low serum potassium and magnesium, and identify the rate of replacement for patients with low serum potassium and magnesium levels" Ajewole et al (2020).

Abstract:

Background: Patients receiving chemotherapy frequently experience electrolyte imbalances. Electrolyte replacement is, therefore, a necessity as patients may experience life-threatening symptoms. Study objective: The objective of this study was to evaluate the occurrence of low serum potassium and magnesium, and identify the rate of replacement for patients with low serum potassium and magnesium levels. Based on our findings, we developed and implemented a nursing-driven electrolyte replacement protocol. Methods: Preimplementation phase – A retrospective review for serum potassium and magnesium values obtained during infusion clinic visit between 1 August and 31 October 2016 was conducted. Implementation phase – A nursing-driven electrolyte replacement protocol with medication order “smart-set” and order selection intelligence within EPIC Beacon was developed and implemented in May 2017. Postimplementation phase – The postimplementation phase data were collected from 1 August to 30 November 2017 using a similar approach as the preimplementation phase. Results: Preimplementation phase – During the preimplementation phase of the study, a total of 1495 serum potassium levels and 1193 serum magnesium levels were obtained. Among the 152 patients who needed potassium replacement, 34% (n = 52) were replaced and among the 118 serum magnesium levels that needed replacement, 30% (n = 35) were replaced. Postimplementation phase – 3979 serum potassium and 2707 magnesium levels

were obtained. Among the 170 patients who needed potassium replacement, 75% (n = 127) were replaced. Among the 142 patients who needed magnesium replacement, 73% (n = 104) were replaced. Conclusion: A 121% increase in potassium replacement and a 143% increase in magnesium replacement were identified after implementing this protocol.

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Reference:

Ajewole, V.B., Solomon, J.M., Schneider, A.M. and Heyne, K.E. (2020) Development and implementation of an electrolyte replacement protocol in the outpatient oncology infusion centers of a large academic healthcare system. Journal of Oncology Pharmacy Practice. March 4th. doi: 10.1177/1078155220907671. .

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