CME Effectively Improves the Knowledge, Competence, and Confidence of Nephrologists and Nurses in the Management of Hyperkalemia

AMY LARKIN, PHARM.D; DAVID ANDERSON; GEORGE BOUTSALIS, PHD, Medscape Education, New York, NY

BACKGROUND

As emerging therapies hold promise to improve treatment of hypertension, clinicians are in need of updates on development of new drugs that may ultimately influence their practices. We sought to determine if online, continuing medical education (CME) activities could improve the clinical knowledge, competence, and confidence of nephrologists and nurses related to management of hyperkalemia.

METHODS

Participants were asked to complete a pre-assessment and post-assessment online. Analysis of results was done independently by Medscape on the basis of the proportion of correct responses and the proportion of improvement in scores from pre-assessment to post-assessment.

RESULTS

Pre-and post-assessment of pre/post sample

Methods:

Participants were asked to complete a set of 3 knowledge questions and confidence questions prior to exposure to the content (pre-assessment) and again after exposure (post-assessment) for each educational activity. The questions were multiple-choice, and the test was scored using a pass/fail system. Chi-square tests were conducted to determine if the change in scores was statistically significant.

Question 1

A 46-year-old male patient hospitalized with end-stage chronic kidney disease (CKD) has a nonhemolyzed serum potassium (K+) level of 6.9 mEq/L. A previous nonhemolyzed K+ reading obtained a few hours earlier was 6.1 mEq/L. Dialysis is not available at the hospital. Which of the following options is the best treatment that can be administered in the hospital setting?

- Intravenous sodium bicarbonate
- Sodium polystyrene sulfonate (SPS)
- Potassium exchange resins
- Potassium-washing solution

Answer: 44% of nephrologists (n=153) and 35% (n=747) of nurses reported increased confidence in their ability to apply short- and long-term strategies for the management of hyperkalemia.

Question 2

How confident are you about your ability to treat severe hyperkalemia in a hospitalized patient?

- Not confident
- Very confident

Answer: 14% (n=153) of nephrologists and 25% (n=1357) of nurses reported increased confidence in their ability to treat severe hyperkalemia.

Question 3

What is the mechanism of action of emerging treatment options compared to traditional options?

- They eliminate K+ from the body
- They decrease K+ levels in the body
- They increase K+ levels in the body
- Other

Answer: 28% (n=167) of nephrologists and 38% (n=747) of nurses reported increased confidence in their ability to apply short- and long-term strategies for the management of hyperkalemia.

Self-efficacy results:

A 72-year-old male patient is admitted to the hospital with an acute kidney injury. He is taking multiple medications to control his blood pressure and has an anatomic location of potassium binding. He has a nonhemolyzed serum potassium (K+) level of 6.9 mEq/L. A previous reading obtained a few hours earlier was 6.1 mEq/L. Dialysis is not available at the hospital. Which of the following options is the best treatment that can be administered in the hospital setting?

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Answer: 44% of nephrologists (n=153) and 35% (n=747) of nurses reported increased confidence in their ability to treat severe hyperkalemia.

CONCLUSION

This study demonstrates the success of online, video-based education on improving knowledge, competence and confidence of cardiologists and nurses related to emerging treatments for hyperkalemia and their potential use in the hospital setting.

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Disclosures:

The authors have nothing to disclose.

References: