

### Q3

#### **Title: Is Orange Juice Guilty?**

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"A 31-year-old female is admitted for diabetic ketoacidosis (DKA). She has a history of diabetes mellitus type 1 and chronic kidney disease (CKD) stage 3 on angiotensin receptor blocker.

The DKA resolved however she suffered from labile blood glucoses and hyperkalemia, as high as 6.9 mmol/L. She had at least six episodes of hypoglycemia.

Hypoglycemic episodes were treated with orange juice. It is estimated she was given approximately 56 ounces of orange juice in a 24 hour time period.

Orange juice has 12.7 meq of potassium and 21 grams of sugar in eight ounces. It is a common treatment for hypoglycemia due to accessibility and the assumption that it does not cause side effects. She received up to 25 meq of potassium at once despite normokalemia.

D50 ampules (commonly 12.5 or 25 grams) would have been better, as there is no potassium in these formulations and have a similar sugar content as four to eight ounces of orange juice.

Easier access to IV D50 or oral glucose gels should be considered to decrease the use of orange juice as hypoglycemic treatment. These may prevent hyperkalemia, especially in those with CKD and/or on hyperkalemic-potentiating medications. This illustrates the importance of reviewing a patient's comorbidities and medications before recommending any treatment.

The patient's potassium was brought down to a normal range through medical intervention. Had the patient been treated with D50 ampules initially, hyperkalemia would have been avoided.

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