ARCHIVES OF HELLENIC MEDICINE: ISSN 11-05-3992

CONTINUING MEDICAL EDUCATION
ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

ARCHIVES OF HELLENIC MEDICINE 2011, 28(3):428
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2011, 28(3):428

Acid-Base Balance-Electrolyte Quiz – Case 20

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A 62-year-old woman with hypertension and type 2 diabetes mellitus was admitted to our Internal Medicine clinic for dizziness, confusion, muscle weakness, instability and fatigue. Drug treatment included valsartan (160 mg/day), amlodipine (5 mg/day), metformin (1.000 mg×2/day) and esomeprazole (40 mg/day). Laboratory investigation showed serum glucose 132 mg/dL, urea 24 mg/dL, creatinine 1.1 mg/dL, potassium 3.7 mEq/L, sodium 138 mEq/L, magnesium 0.5 mEq/L and calcium 8.4 mg/dL.

Which is the cause of hypomagnesemia?

a. Diabetes mellitus

b. The administration of metformin

c. The administration of valsartan

d. The administration of esomeprazole.

Comment

This is another case of proton pump inhibitors (PPI)-induced severe and symptomatic hypomagnesemia, which is possibly due to decreased intestinal magnesium absorption. It is worth mentioning that serum magnesium levels should be monitored in patients on long-term PPI treatment and specifically in diabetic patients who are at increased risk for the development of hypomagnesemia.

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Diagnosis: *Esomeprazole-induced hypomagnesemia*