

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Acid-base Balance-Electrolytes Quiz – Case 5

A 39-year-old woman was admitted to the hospital after being brought by a family member because of a 24-hour history of increasing confusion. Her medical history was remarkable for long-standing alcohol abuse. Her daily intake was approximately 18 cans of beer. The patient's initial mental status showed a somnolent woman with difficulty with short-term memory. Serum sodium levels on presentation were 100 mEq/L.

The cause of patient's hyponatremia is:

- a) Syndrome of inappropriate antidiuresis
- b) Beer potomania syndrome
- c) Hypovolemia
- d) Pseudohyponatremia

ARCHIVES OF HELLENIC MEDICINE 2008, 25(4):539
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2008, 25(4):539

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Comment

The patient exhibited hyponatremia due to beer potomania syndrome. These patients have a history of significant beer drinking (increased water intake) in conjunction with a poor diet resulting in a very low osmole intake, since beer has very little sodium and no protein, but has some calories that prevent endogenous protein breakdown (urea generation). The resulting decreased solute excretion limits the ability of free water excretion. Thus, the combination of increased water intake with the decreased ability to excrete water can lead to water retention and decreased sodium levels.

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Diagnosis: Beer potomania syndrome