A 33-year-old female chronic dialysis patient was admitted on a Friday evening to the hospital because of coma. Physical examination revealed moderate neck vein distention, clear lungs, and 2+ peripheral edema in addition to coma.

Chest X-ray showed widening of the cardiac silhouette. Following correction of hypoglycemia the patient was dialyzed; during dialysis the patient was intermittently hypotensive. Over the weekend she had another hypoglycemic episode.

A 24-year-old man was admitted to the emergency room because of severe weakness and confusion. He was unable to give a history.

Na 137 mEq/l
K 2.1 mEq/l
Cl 110 mEq/l
HCO3 14 mEq/l
pH 6.93
PCO2 65 mm Hg
pQ2 40 mm Hg

The patient was intubated and ventilated. Potassium was given intravenously. Urine pH 6.10, blood pH 7.20.

This patient’s clinical presentation can be explained by one disorder. What is that disorder? What radiologic procedure could have been performed in the emergency room that might have confirmed the diagnosis?

BUN 41 mg/dl
Cr 12.2 mg/dl
Na 137 mEq/l
R 4.0 mEq/l
Cl 93 mEq/l
HCO3 15 mEq/l
Glucose 29 mg/dl

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On Sunday night the patient went into shock and could not be resuscitated.

pH, 6.97
pco2, 21 mm Hg
Na, 133 mEq/l
K, 4.4 mEq/l
Cl, 93 mEq/l
HC03, 4 mEq/l

What is the explanation for the patient’s hypoglycemia?
What was the cause of the acidemia?
What was the cause of the circulatory instability?
For Answers see page 68