

Case Study 1: Patient N.B.

Diabetic Ketoacidosis

Patient Profile

N.B., a 34-year-old Native American man, was admitted to the emergency department after he was found unconscious by his wife in their home.

Subjective Data (Provided by Wife)

- Was diagnosed with type 1 diabetes mellitus 12 mo. ago
- Was taking 50 U/day of insulin: 5 U of lispro insulin with breakfast, 5 U with lunch, and 10 U with dinner Plus 30 U of glargine insulin at bedtime
- States a history of gastroenteritis for 1 wk with vomiting and anorexia
- Stopped taking insulin 2 days ago when he was unable to eat

Objective Data

Physical Examination

- Breathing deep and rapid
- Fruity acetone smell on breath
- Skin flushed and dry

Diagnostic Studies

- Blood glucose level 730 mg/dL (40.5 mmol/L)
- Blood pH 7.26

Discussion Questions

1. Briefly explain the pathophysiology of the development of diabetic ketoacidosis (DKA) in this patient. Stress on the body from being sick vomiting and anorexia. not eating and pt stopped taking insulin when he was sick
2. What clinical manifestations of DKA does this patient exhibit? Loss of appetite. Fruity acetone smell on breath
3. What factors precipitated this patient's DKA?
Infection that caused stress on the body and the vomiting and the patient wasn't eating and stopped taking insulin 2 days ago deep rapid breathing
4. Priority Decision: What is the priority nursing intervention for N.B.? teach pt and wife and provide printed material for unmanaged diabetes. Demonstrate to the pt how to check blood sugars at home and give insulin.
5. What distinguishes this case history from one of hyperosmolar hyperglycemic syndrome (HHS) or Hypoglycemia? Spilling ketones in urine ph less than 7.5, hhs is more common in elderly with type 2 diabetes
6. Priority Decision: What is the priority teaching that should be done with this patient and his family? Teach the importance of taking insulin even when sick. That he should never stop it.
7. What role should N.B.'s wife have in the management of his diabetes? Make sure he takes his insulin even if he is sick and if he cant eat try to give him some soup and keeping him hydrated or meal replacement shake
8. Priority Decision: Based on the assessment data presented, what are the priority nursing diagnoses? Are there any collaborative problems?
Fluid and electrolyte imbalance pt is throwing up and not being able to eat. Yes will have to collaborate with the dr to get orders electrolytes and fluids.
9. Evidence-Based Practice: N.B.'s wife asks you if she should have given her husband insulin when he got sick? How would you respond? Yes continue to take insulin even on sick days.