

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.
 1. **Diabetic ketoacidosis (DKA) is a life threatening complication of diabetes. This is usually only found in Type 1 diabetics and develops when your body does not have enough insulin to allow sugar to enter into your cells and use it for energy.**
2. What clinical manifestations of DKA does this patient exhibit?
3 P's. Polyuria, Polyphagia, and Polydipsia. They also may experience very high blood sugars and kussmaul breathing.
3. What factors precipitated this patient's DKA?
this patient's DKA would be him being a type 1 diabetic, not taking his insulin for two days because he couldn't eat and also not being able to eat and being dehydrated due to his vomiting.
4. Priority Decision: What is the priority nursing intervention for N.B.? **administer his insulin and get an order for iv fluids due to the dehydration.**
5. What distinguishes this case history from one of hyperosmolar hyperglycemic syndrome (HHS) or Hypoglycemia? **Deep rapid breathing, his breath smells fruity and the skin is flushed and dry.**
6. Priority Decision: What is the priority teaching that should be done with this patient and his family?
-to be sure to always take your insulin. When you miss your insulin too many times it puts you into a hypoglycemic state
7. What role should N.B.'s wife have in the management of his diabetes?
- She needs to know the signs and symptoms of when her husband is getting low and what to do when that happens.
8. Priority Decision: Based on the assessment data presented, what are the priority nursing diagnoses? Are there any collaborative problems?

-imbalanced nutrition and the collaborative problem for this is the lack of fluid and food intake.

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, even when you are sick you need to continue your insulin to prevent any further issues.