

A Deceptive Recovery: When Falling Glucose Concealed Rising Acidosis in Pregnancy



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Why This Case Matters

Pregnancy creates a unique vulnerability to DKA, with reduced bicarbonate buffering, accelerated starvation ketosis, and increasing insulin resistance, allowing ketoacidosis to develop rapidly and at lower glucose levels than in nonpregnant patients.

 **17.6%** of DKA admissions in pregnancy present with euglycemic DKA.

Case Presentation

 22-year-old G1P0  31w6d gestation  Type 1 DM

PRESENTING SYMPTOMS

- 4 days of nausea and vomiting
- Poor PO intake
- Took long-acting insulin; only ½ short-acting insulin

HOME INSULIN REGIMEN

 **Insulin glargine** (Lantus)
28 units every morning

 **Insulin lispro** (Humalog)
17 units with meals and 38 units each evening

INITIAL EVALUATION

 **FHT:** reassuring  **CO₂:** 13 mEq/L

 No contractions  **Anion gap:** 19.1 mEq/L

 **Glucose:** 165 mg/dL  **UA:** 4+ ketones, 3+ glucose

PENDING LABS

 Beta-hydroxybutyrate

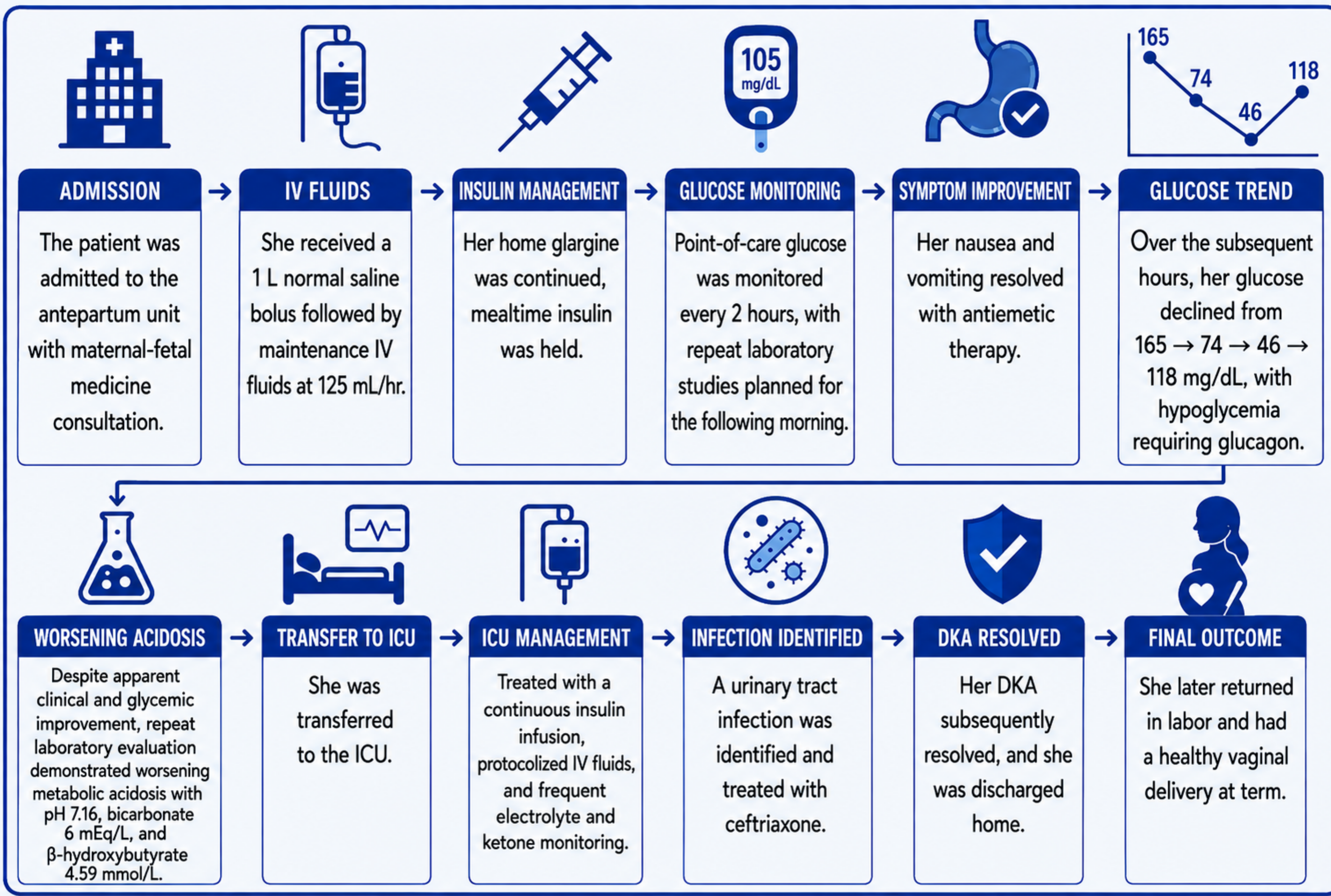
 Lactic acid

 Hemoglobin A1c

 No blood gas obtained.

Received IV fluids and antiemetics before admission to the antepartum unit.

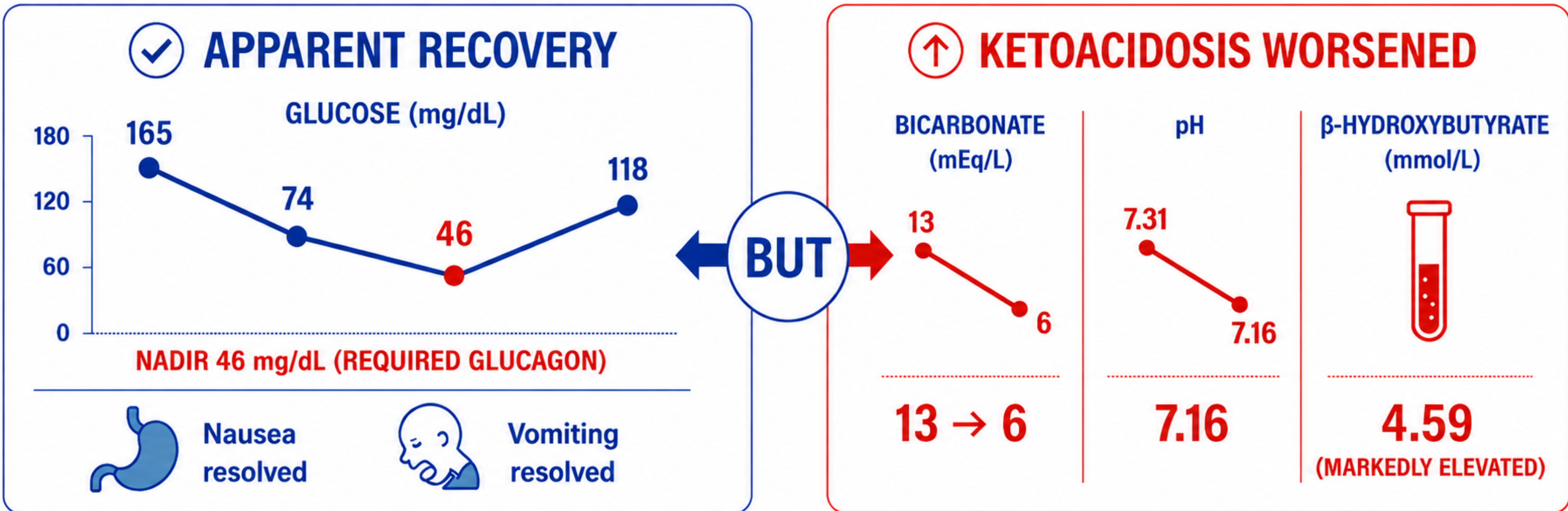
Clinical Course



Where Management Diverged

INITIAL MANAGEMENT	DKA-FOCUSED MANAGEMENT
 Home subcutaneous glargine continued No IV insulin was started at presentation.	 Continuous IV insulin Initiate continuous IV insulin per DKA protocol.
 Maintenance IV fluids at 125 mL/hr Rather than aggressive isotonic volume replacement.	 Aggressive isotonic fluid resuscitation Start with 1–1.5 L isotonic saline, then adjust per hemodynamic status.
 Labs planned for the following morning Rather than frequent monitoring.	 Frequent metabolic monitoring Check electrolytes, glucose, anion gap, and β-hydroxybutyrate every 2–4 hours.
 No blood gas obtained Initial CO ₂ and acid-base status unknown.	 Early acid-base assessment Obtain VBG/ABG early to assess severity and guide management.
 Precipitating infection (UTI) identified after ICU transfer Delayed recognition of potential trigger.	 Early evaluation for precipitating factors Assess for infection, missed insulin, or other stressors at presentation.

The Deceptive Recovery



FALLING GLUCOSE ≠ RESOLVING DKA

This discordance highlights a critical feature of DKA in pregnancy: **glucose normalization does not indicate resolution of ketoacidosis.**

Clinical Pearls

- DKA in pregnancy can occur at **lower glucose levels**, making glucose an unreliable marker of severity or resolution.
- **Falling glucose & symptom improvement do not indicate DKA resolution** if metabolic abnormalities persist
- DKA resolution should be guided by **pH, bicarbonate, anion gap, and β-hydroxybutyrate**
- Early **IV insulin, fluid resuscitation, frequent monitoring**, trigger identification, and appropriate triage are essential to prevent deterioration

References

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