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Maternal Survival in a Rare Triple Challenge: Diabetic Ketoacidosis, Acute Pancreatitis, and Intrauterine Fetal Demise at 29 Weeks of Gestation

★ Second Prize — Best Paper Presentation Award (2025–2026)

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BACKGROUND

Diabetic ketoacidosis (DKA) is a rare but catastrophic metabolic emergency complicating only 0.5–3% of diabetic pregnancies. Pregnancy predisposes women to accelerated starvation, insulin resistance, and ketosis, making DKA develop rapidly, even at relatively lower blood glucose levels. Acute pancreatitis in pregnancy is itself uncommon (approximately 1 in 1,000–5,000 pregnancies), and when associated with DKA, forms a vicious cycle in which each condition aggravates the other. Both conditions are independently associated with significant maternal morbidity and fetal loss. The coexistence of DKA, acute pancreatitis, intrauterine fetal demise (IUFD), and a previous cesarean section in the third trimester is exceptionally rare, posing major diagnostic and therapeutic challenges. Successful maternal outcome depends on early recognition, prompt metabolic stabilization, multidisciplinary management, and timely obstetric intervention.

AIM

To highlight the importance of early diagnosis, multidisciplinary critical care, and timely obstetric intervention in achieving maternal survival in a rare and life-threatening combination of diabetic ketoacidosis, acute pancreatitis, and intrauterine fetal demise during pregnancy.

CASE PRESENTATION

A 38-year-old G3P1L1A1 with a previous lower segment cesarean section presented at 29+3 weeks' gestation after referral from a peripheral hospital with diabetic ketoacidosis, acute pancreatitis, and intrauterine fetal demise. She had recently been diagnosed with diabetes mellitus. On admission, random blood sugar was 292 mg/dL, fetal heart sounds were absent, and investigations revealed

HbA1c 11.1%, positive serum acetone, elevated lipase (494 U/L), amylase (165 U/L), CRP (118 mg/L), electrolyte abnormalities, and metabolic derangements consistent with DKA and acute pancreatitis.

Following aggressive resuscitation with insulin infusion, electrolyte correction, fluid therapy, antibiotics, and multidisciplinary ICU care involving obstetrics, medicine, surgery, anesthesia, and critical care teams, the patient underwent emergency repeat cesarean section under general anesthesia due to worsening maternal condition in the presence of a previous cesarean scar. A 1.6 kg male fetus with IUFD was delivered. The postoperative period required prolonged ICU care, delayed extubation, intensive glycemic control, thromboprophylaxis, nutritional support, and management of pancreatitis. The patient improved gradually and was discharged in stable condition on postoperative day 10.

CLINICAL IMPLICATIONS

- DKA in pregnancy is an obstetric emergency. Acute pancreatitis should be suspected in pregnant women with DKA who present with severe abdominal pain or persistent metabolic acidosis, as both conditions may coexist and worsen each other.
- A multidisciplinary team approach along with strict antenatal diabetes screening, patient education, and early referral to tertiary care centers are vital to prevent catastrophic outcomes.
- This case reinforces that maternal survival in complex obstetric emergencies depends not only on timely obstetric intervention but also on early metabolic resuscitation, multidisciplinary coordination, and adherence to standardized critical care protocols. Strengthening antenatal diabetes screening and regional referral pathways may help prevent similar catastrophic presentations.

DISCUSSION

The concurrence of DKA, acute pancreatitis, and IUFD in pregnancy is extremely rare and carries a very high risk of maternal and fetal mortality. This case demonstrates that early referral, prompt diagnosis, aggressive correction of metabolic abnormalities, coordinated multidisciplinary management, and timely delivery can prevent maternal mortality even in the presence of multiple life-threatening complications.

CONCLUSION

This case emphasizes that maternal stabilization should remain the primary goal in complex obstetric emergencies. Early recognition of DKA, prompt management of associated acute pancreatitis, and timely termination of pregnancy when indicated are crucial to improving maternal outcomes. Strengthening antenatal diabetes screening and ensuring early referral to tertiary care centers are essential for reducing preventable maternal morbidity and mortality.