

## Introduction

Diabetic ketoacidosis (DKA) is a critical metabolic emergency often triggered by infection, missed insulin, or stress. Though uncommon, myocardial infarction—especially NSTEMI—can precipitate DKA, posing diagnostic and therapeutic challenges due to overlapping symptoms and competing priorities in fluid and cardiac management.

## Case summary

A 51-year-old male with type 2 diabetes mellitus on tirzepatide, hypertension, and dyslipidemia presented with a two-day history of central chest pain radiating to the left arm. The pain was severe, burning, and associated with nausea, vomiting, exertional dyspnea, and orthopnea. He denied dizziness or palpitations and had a remote history of suspected ACS.

On exam, he was dehydrated, hypotensive (BP 92/68 mmHg), tachycardic (HR 118 bpm), and tachypneic (RR 22). ECG showed sinus tachycardia with ST depressions in V4–V6 and T wave inversion in V6. Venous blood gas revealed high anion gap metabolic acidosis with pH 7.06, bicarbonate 9 mmol/L, glucose 20.1 mmol/L, and ketones >7 mmol/L—confirming DKA.

DKA was managed with IV fluids, insulin, and electrolyte replacement. Troponin T was elevated (56.2 ng/L, peaking at 429 ng/L), raising concern for NSTEMI. Cardiology initiated conservative management. Patient was transferred to ICU.

Repeat VBG showed DKA resolution. Coronary angiography on day 2 revealed severe multivessel coronary artery disease. Echocardiography showed EF 40–45% with regional wall motion abnormalities. The patient underwent CABG and has since shown favorable recovery. Post-op ECG showed resolution of ST changes.

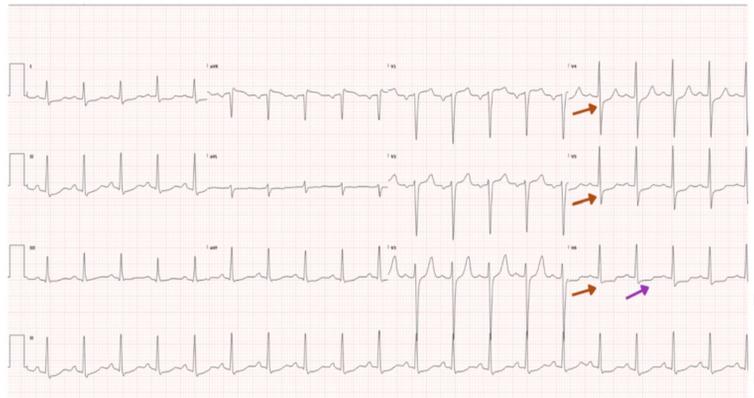


Figure 1: Electrocardiogram showing ST segment depression in leads V4, V5, V6 (Red arrows) and T wave inversion in V6 (Purple arrow)

## Discussion

This case highlights the rare but important occurrence of NSTEMI-induced DKA. MI-related inflammation and catecholamine surge can trigger metabolic collapse in diabetics. Management requires balancing DKA resuscitation with cardiac risks. Early recognition and coordinated care are crucial for optimal outcomes.

## Conclusion

The coexistence of DKA and NSTEMI highlights a critical overlap of metabolic and cardiac emergencies. In this case, early recognition and coordinated care were key to recovery. It underscores the importance of cardiac evaluation during DKA, as silent MI may precipitate metabolic decompensation.