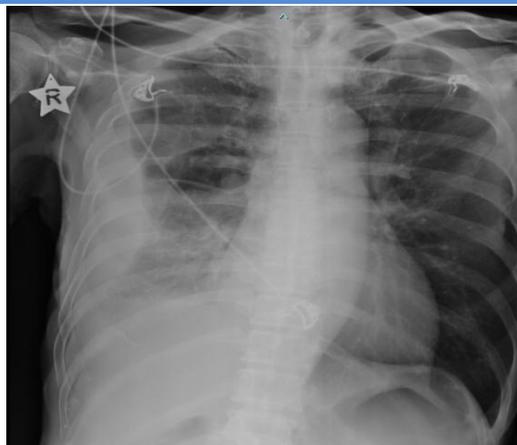


## INTRODUCTION

Diabetic Ketoacidosis (DKA) is a life-threatening complication of diabetes mellitus (DM). While DKA has been associated with various cardiovascular complications, pseudo myocardial infarction is a rare and often overlooked, and misdiagnosis may result in inappropriate thrombolytic therapy in the emergency department.

## CASE DESCRIPTION

A 67-year-old male with history of DM, hypertension, and dyslipidemia presented with altered consciousness, shortness of breath, and vomiting. Respiratory examinations revealed patient was tachypneic and crackles over right lung with reduced air entry. Results showed glucose 32 mmol/L, high serum ketones, and severe high anion gap metabolic acidosis. Electrocardiography (ECG) showed ST-segment elevation in V2-V6, lead I and aVL with reciprocal changes in inferior leads. Chest x-ray revealed right lobar consolidation with pleural effusion. Bedside echocardiography showed poor heart contractility and hypokinetic segments over anterior wall. Investigations showed WBC 13,600 /uL, potassium 5.3 mmol/L, creatinine 164 mmol/L, high-sensitivity troponin I 24,641 ng/ml. Patient was started on modest fluid resuscitation with intermittent reassessment, fixed-scale insulin therapy, and potassium replacement. Patient was thrombolysed with streptokinase with initial diagnosis of extensive antero-lateral STEMI complicated with DKA. However, post-thrombolysis ECG showed no ST-segment resolution. Serial ECGs showed resolution of the previously noted ST-segment changes. He was planned for outpatient angiogram.



## DISCUSSION

Pseudoinfarction pattern in DKA can be due to acid-base disturbances, hyperkalemia, increased blood viscosity, and the direct effects of ketone bodies on myocardial cells. In previous reports, there was no echocardiographic or angiographic evidence to suggest occlusion myocardial infarction. The management of pseudo myocardial infarction in DKA primarily involves the correction of metabolic derangements, with close monitoring for resolution of ECG changes and improvement in cardiac biomarkers. In some cases, a coronary angiogram may be needed to exclude occlusive myocardial infarction.

## CONCLUSION

Clinician should aware the uncommon electrocardiographic alterations in a patient with severe DKA which can mimic myocardial infarction in order to avoid unnecessary treatments.

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