

**PP038 ISOLATED RIGHT
VENTRICULAR INFARCTION:
AN UNUSUAL ED CASE**

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INTRODUCTION

Right ventricular (RV) infarction often occurs together with an inferior wall left ventricular infarction. However, isolated RV myocardial infarction (RVMI) is extremely rare, and is only seen in three percent of MIs. We report a case of an isolated RVMI diagnosed via electrocardiography (ECG) and turned out as severe three vessel coronary artery disease by coronary angiography.

CASE REPORT

A 42 years old man presented with a four hour history of typical ischemic type left sided chest pain. His blood pressure was persistently elevated (178-198/118-120 mmHg), heart rate was 102 bpm and O₂ saturation 99% under room air. Lungs were clear and normal heart sound with no murmur. ECG showed ST-elevation at V₁-V₃ with no reciprocal changes. Subsequent ECGs showed prominent ST-elevation at V₁ and repeated ECG showed no evolving changes. However, chest pain persisted with a pain score of 8/10 which did not resolve despite IV nitrates. Posterior and right sided ECG was done which revealed a 2mm ST elevation at V_{4R}-V_{6R} suggestive of right ventricular infarction with no posterior wall involvement. Bedside ECHO revealed hypokinetic region at inferior wall only. Patient was then admitted for further stabilization.

DISCUSSION

Acute isolated RVMI is due to occlusion of the nondominant right coronary artery and may mimic anterior MI both in ECG and clinical presentation. It is likely to be

underdiagnosed and easily missed. Anterior ST-elevation accompanied by obvious ST-elevation in lead V₁ with no reciprocal changes in limb leads indicate the need for additional ECG recording of the right precordial lead, especially lead V_{4R}, a reliable marker of RVMI. Absence of Q waves in the anterior precordial leads also suggest a diagnosis of RVMI.

CONCLUSION

Identifying a diagnosis of isolated RVMI is challenging. However, early diagnosis with appropriate management is needed to improve clinical outcome.