Right ventricular myocardial infarction: The electrocardiography (ECG) pattern

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A 57-year-old man presented to the emergency department with retrosternal chest heaviness at rest for 4 hours, accompanied with weakness, sweating, and nausea. Patient's vital signs were stable.

In the electrocardiogram (ECG), upsloping ST-segment elevation in leads II, III, and aVF, and reciprocal downsloping ST-depression in leads I and aVL (Figure 1).

Since the 30 to 50 percent of cases with inferior myocardial infarction (MI) associated with right ventricular MI (RVMI), right-sided leads V4R, V5R, and V6R obtained that showed upsloping ST-segment elevation in leads V4R, V5R, and V6R (Figure 2). Initial troponin I and T was normal; but 6 hours later, measurement showed an increase to higher than the upper reference limit. Inferior MI associated with RVMI correlates closely with occlusion of proximal right coronary artery (RCA).1

Due to the ST-segment elevation more than 1 mm in three adjacent limb leads, patient underwent emergency coronary angiography, that 90% stenosis was observed in proximal of RCA. This stenosis treated successfully by primary percutaneous coronary intervention (PCI) with stent placement. Finally, the patient
was discharged with guideline-directed medical therapy$^2$ after improving signs and symptoms and correcting ECG changes.

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**References**
