



THE PRACTITIONER

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Country cardiograms case 29: Answer

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INTERPRETATION

The ECG (Fig. 1, illustrated here and on page 49) shows normal sinus rhythm, rate 63 beats/min, with a normal P-R interval of 0.19 seconds, slightly wide QRS complexes (duration 0.115 sec) and normal QT interval. T waves appear normal. The striking abnormality lies in the ST segments, which are significantly elevated in inferior leads II, III and aVF. Reciprocal ST segment depression is seen in aVL. ST segments are also elevated in lateral leads V5 and V6 and to a lesser extent in V4. ST segment depression of at least 1 mm is present in V1–V3. Tall R waves are present in V2 and V3.

The diagnosis is acute ST elevation inferior myocardial infarction (or injury) with lateral and posterior extension.

DISCUSSION

This ECG shows many of the features commonly associated with inferior myocardial infarction.

Remembering the right coronary artery anatomy and its variations is important. In addition to supplying the inferior wall of the left ventricle, several branches supply the right ventricle. Through the posterior descending artery the right coronary artery supplies the posterior wall of the left ventricle, and another branch supplies the AV node and Bundle of His.

It is therefore useful to look for patterns of infarction, which in the case of right coronary occlusion could include inferior and posterior changes, right ventricular changes and AV blocks. Lateral wall involvement (leads V5 and V6) is also commonly associated.

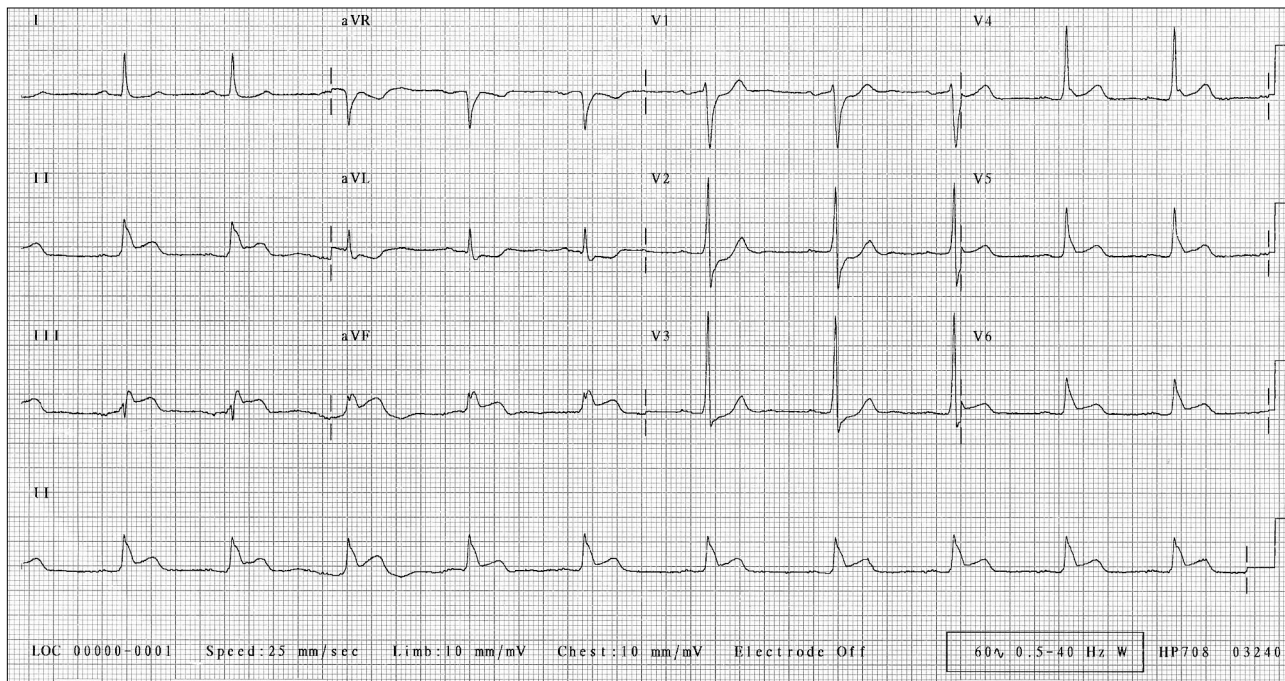


Fig. 1. Results of the first ECG, taken shortly after the patient's arrival in the emergency department.