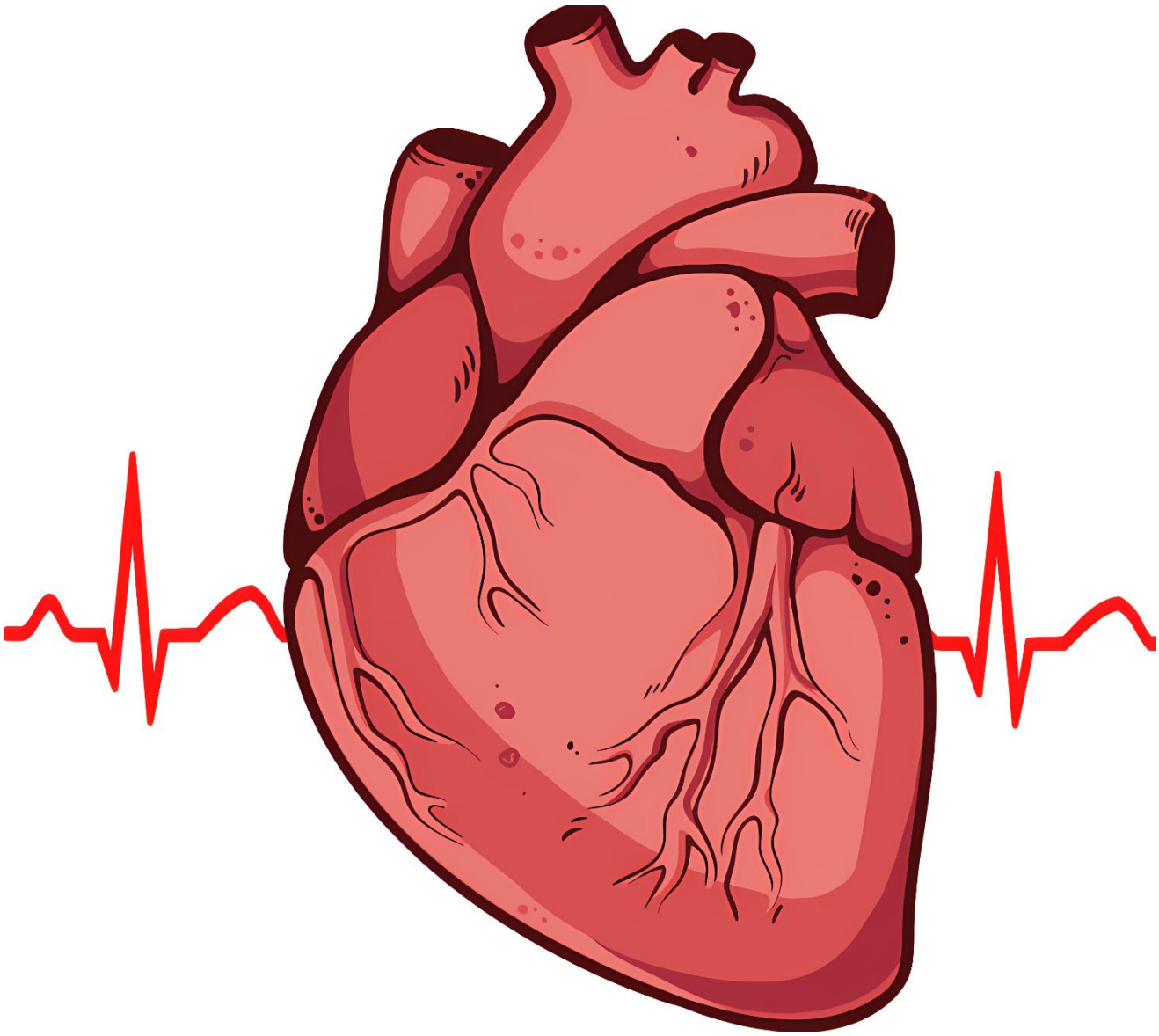
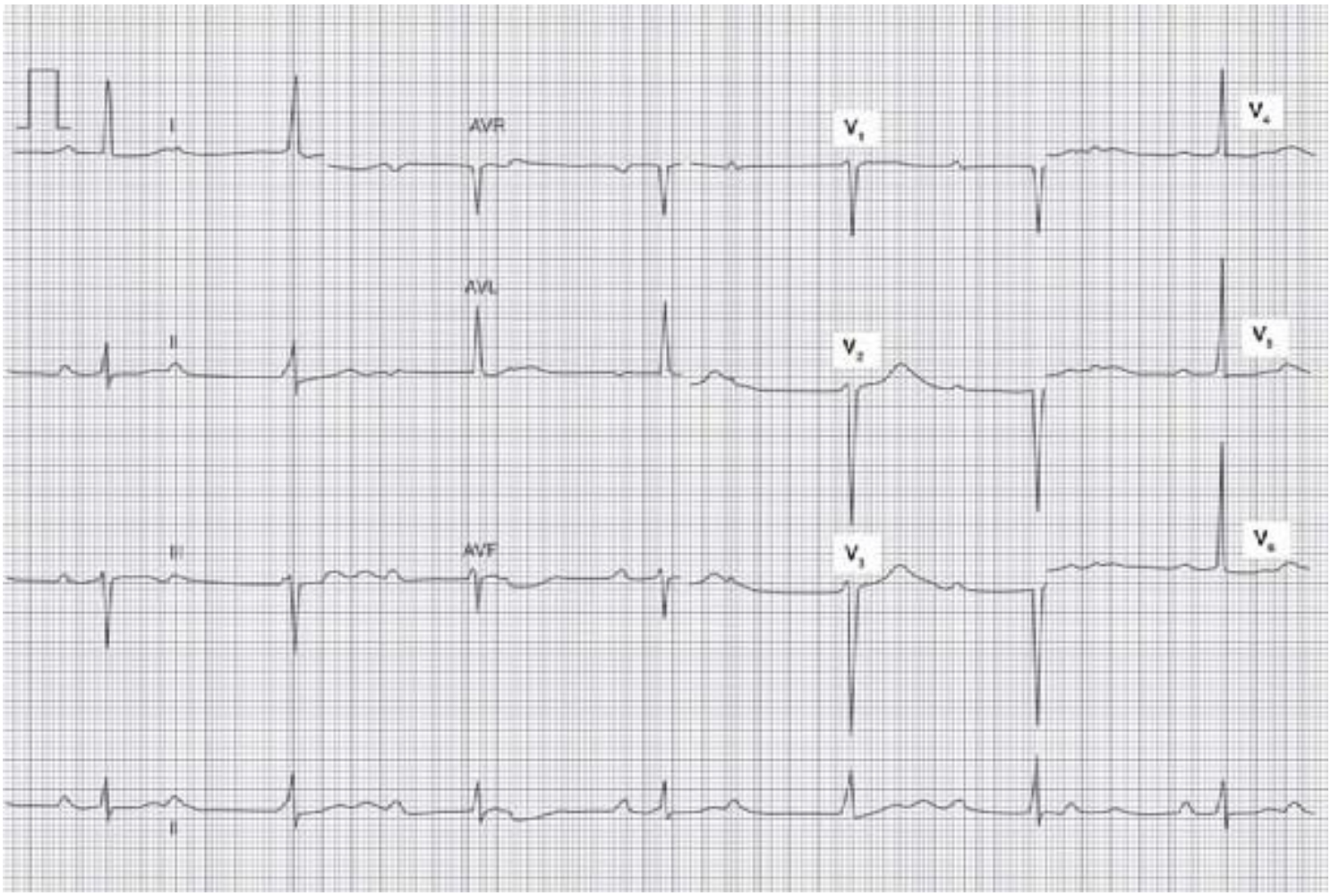
INTERNAL MEDICINE DEPARTMENT

ECG TEACHING BOOKLET



QUESTION 1

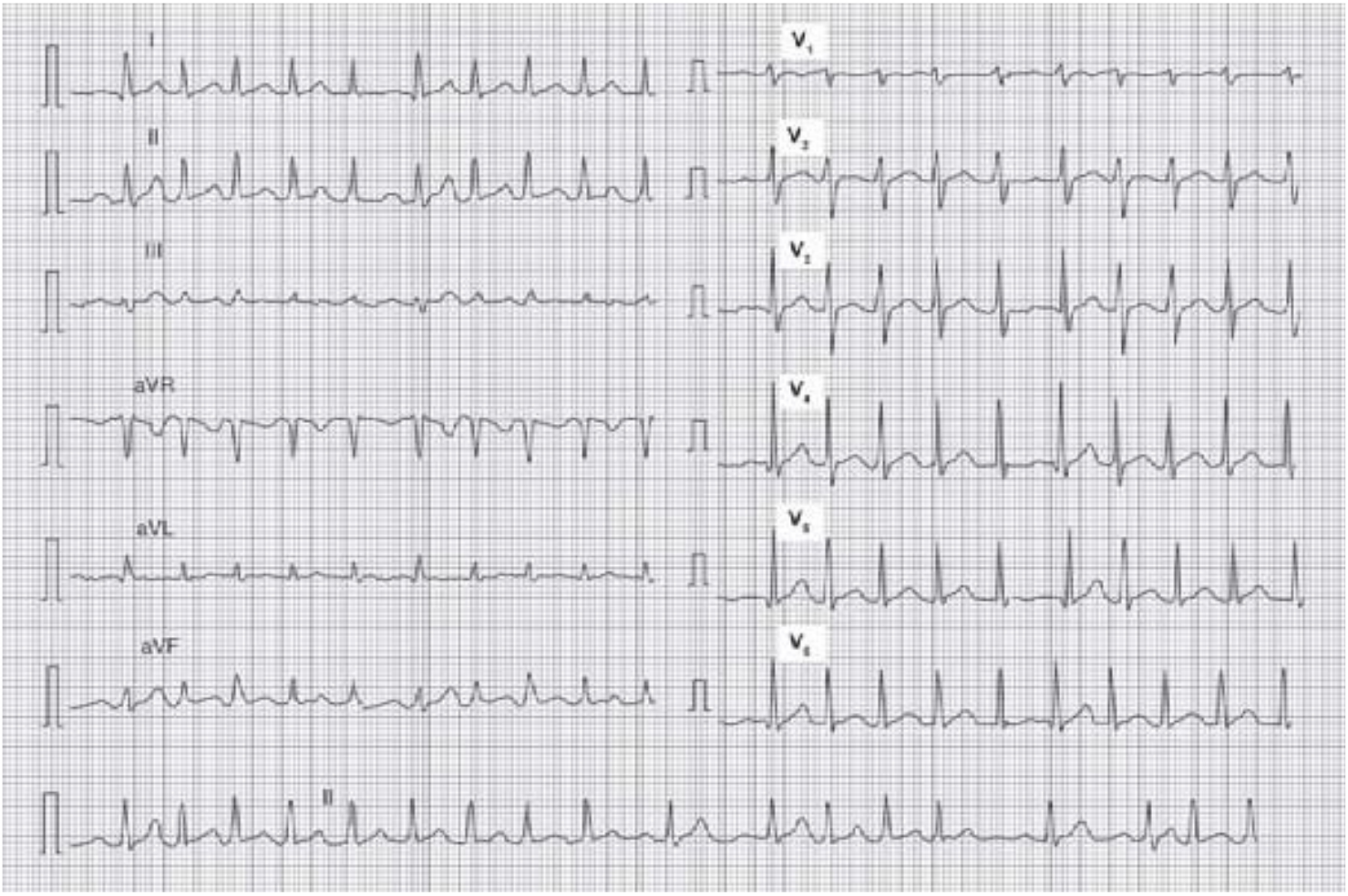


This ECG shows:

- Atrial rate—75/min.
- Ventricular rate—50/m.
- There is complete dissociation between P and QRS.

Diagnosis: Complete heart block.

QUESTION 2

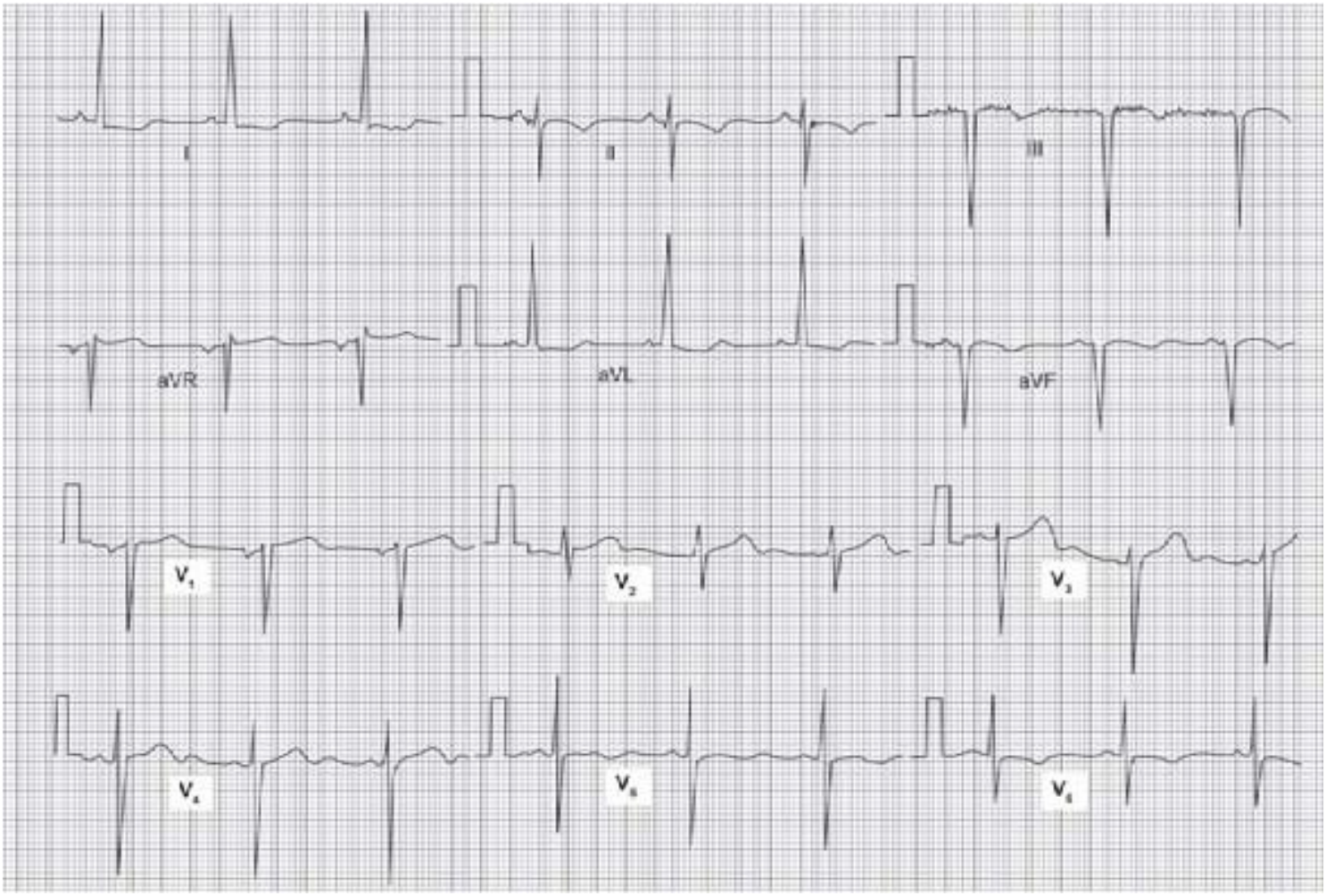


This ECG shows:

- P wave — absent.
- RR interval—irregular (rhythm irregular).
- Heart rate >100/minute.

Diagnosis: Fast atrial fibrillation.

QUESTION 3

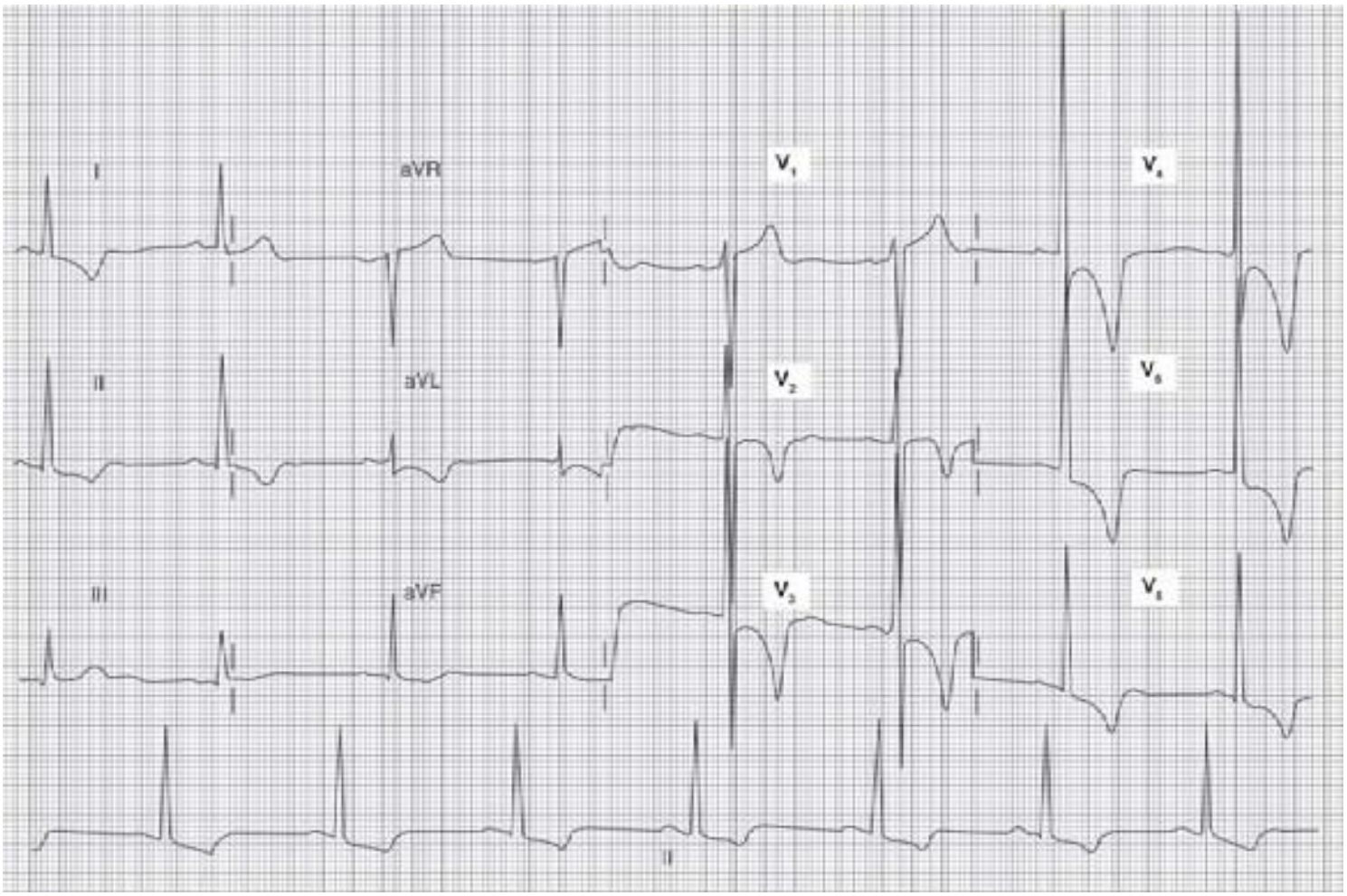


This ECG shows:

- Tall R in lead I, deep S/QS in lead III (indicates left axis deviation).
- Pathological Q in lead III and aVF.
- Tall R (19 mm) in aVL (left ventricular hypertrophy).
- U wave in V4 and V5.

Diagnosis: Old inferior myocardial infarction, left ventricular hypertrophy with hypokalemia.

QUESTION 4

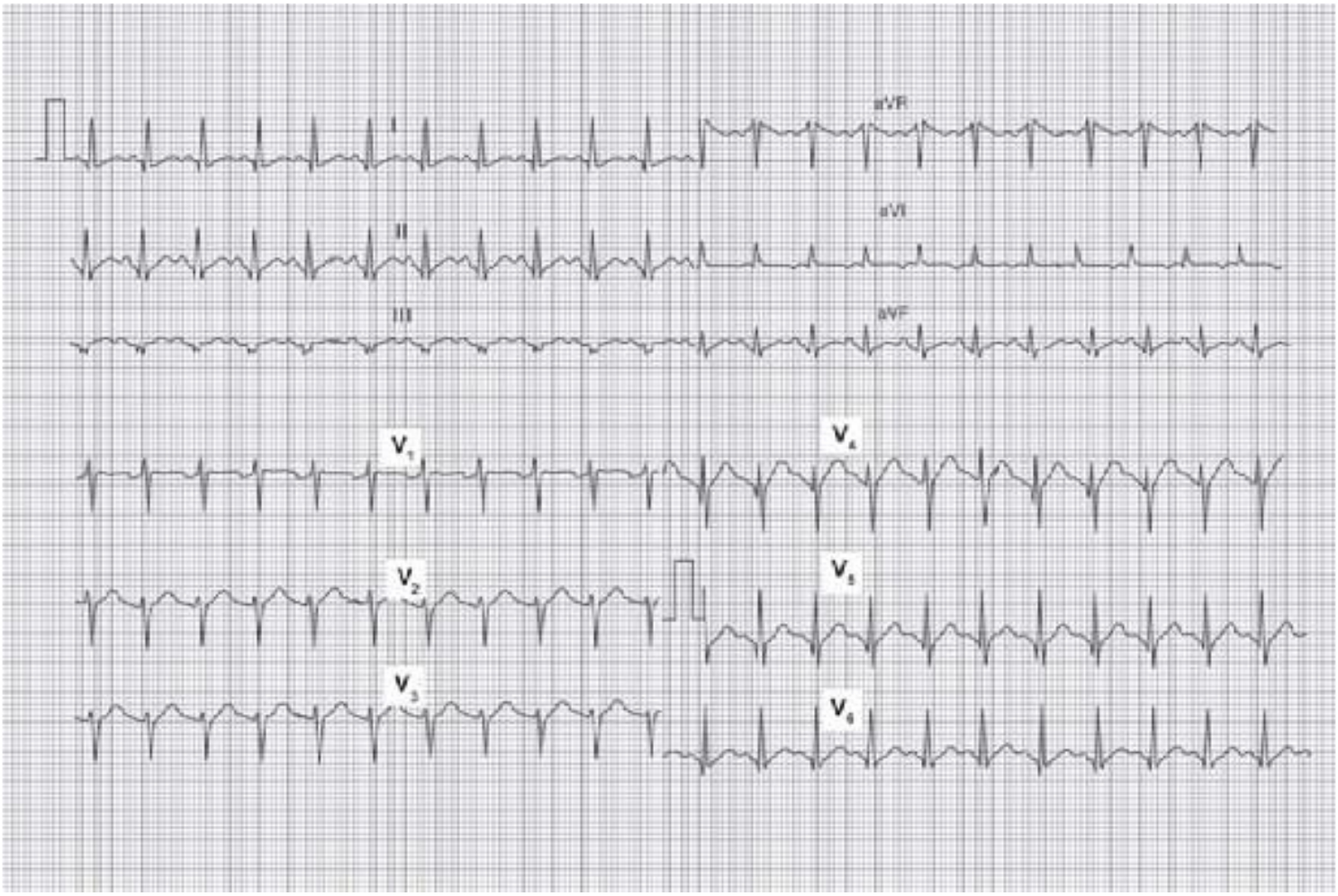


This ECG shows:

- SV1+ RV6 > 35 (here 48).
- T inversion in V2 to V6.

Diagnosis: Left ventricular hypertrophy with strain.

QUESTION 5

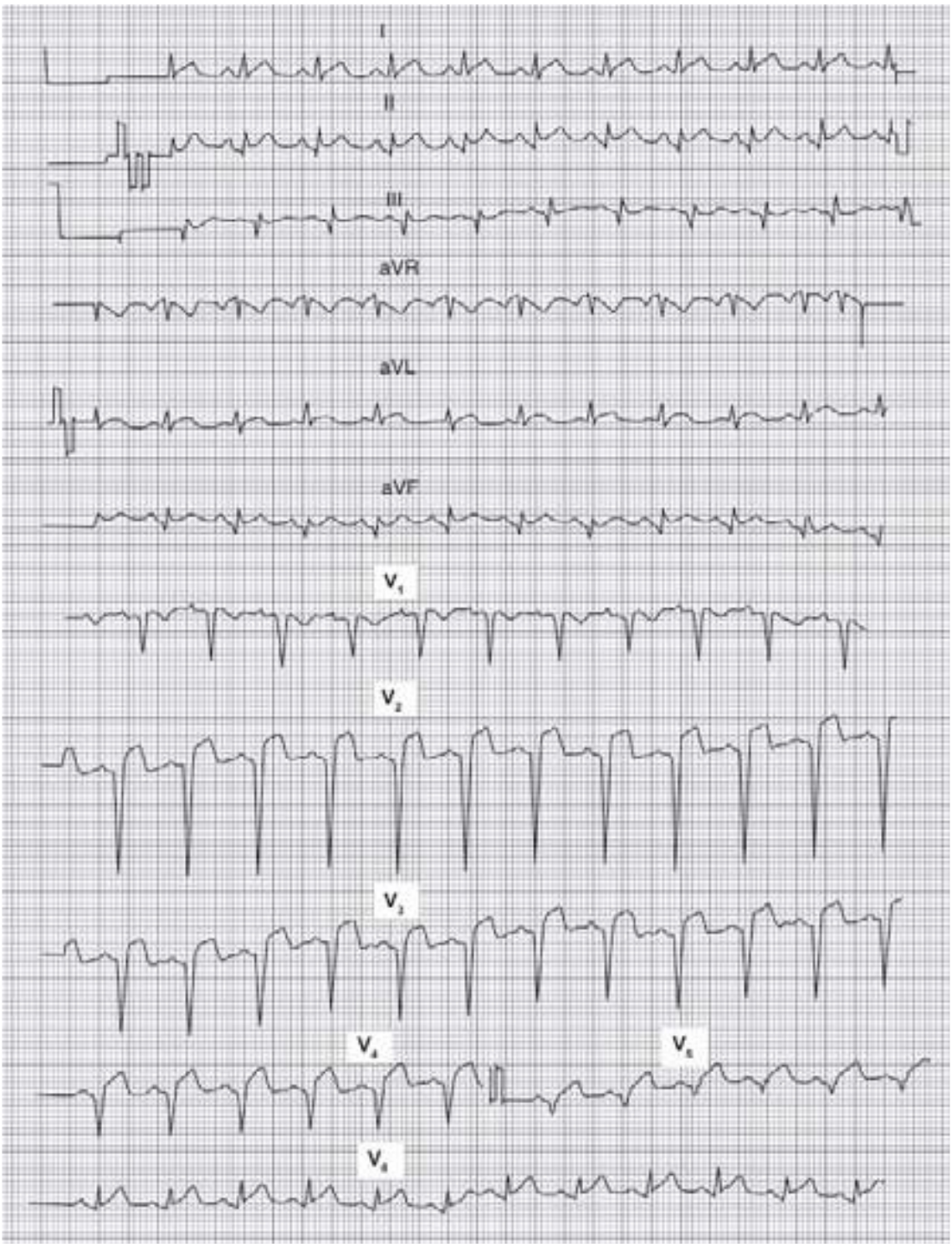


This ECG shows:

- Heart rate—150/min.
- P, QRS and T—normal.
- Rhythm—regular

Diagnosis: Sinus tachycardia.

QUESTION 6

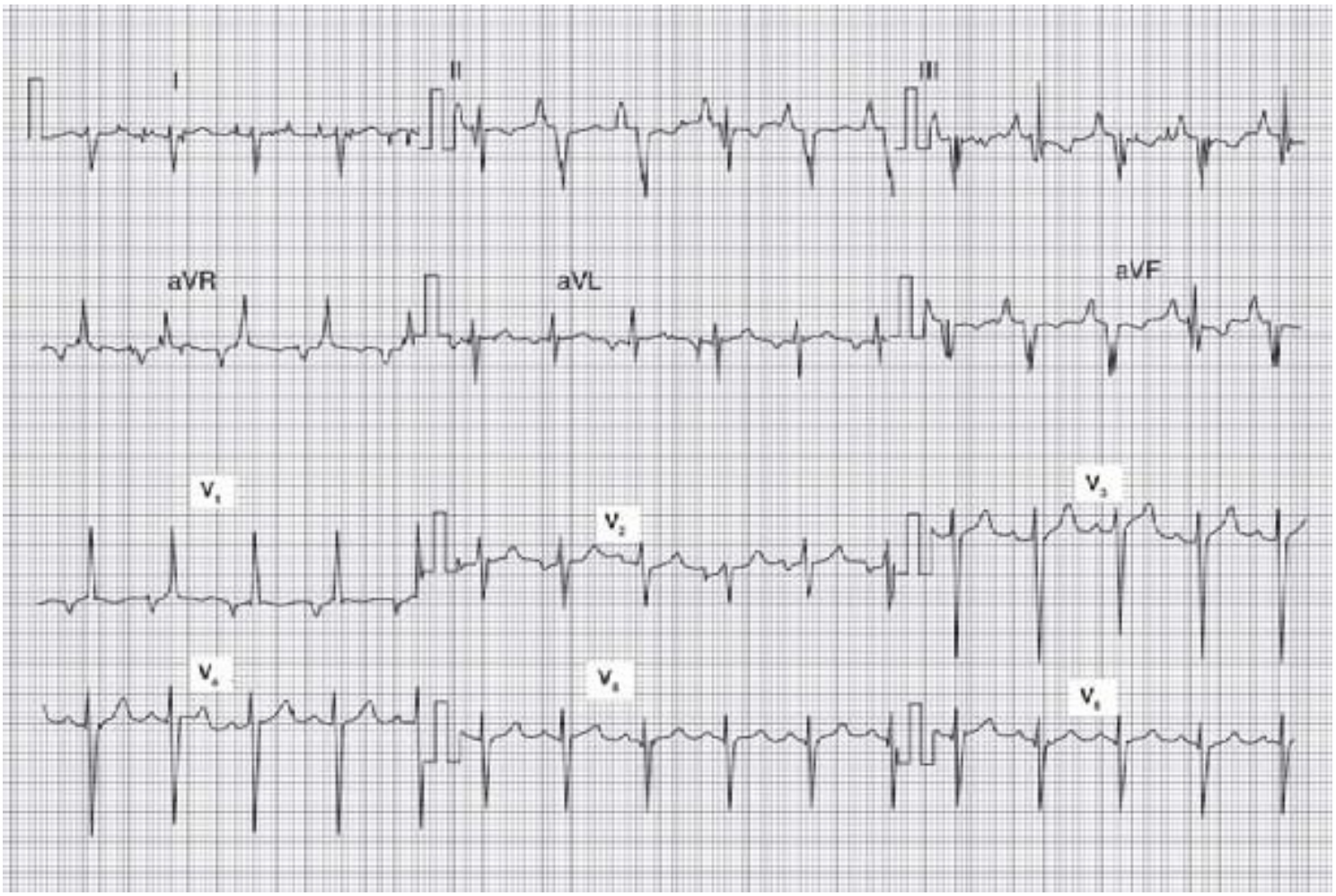


This ECG shows:

- Heart rate — 107/min.
- ST elevation in V2 to V5 and pathological Q in V1 to V5.
- Pathological Q in lead II, III and aVF.

Diagnosis: Acute anterior and old inferior myocardial infarction with sinus tachycardia.

QUESTION 7

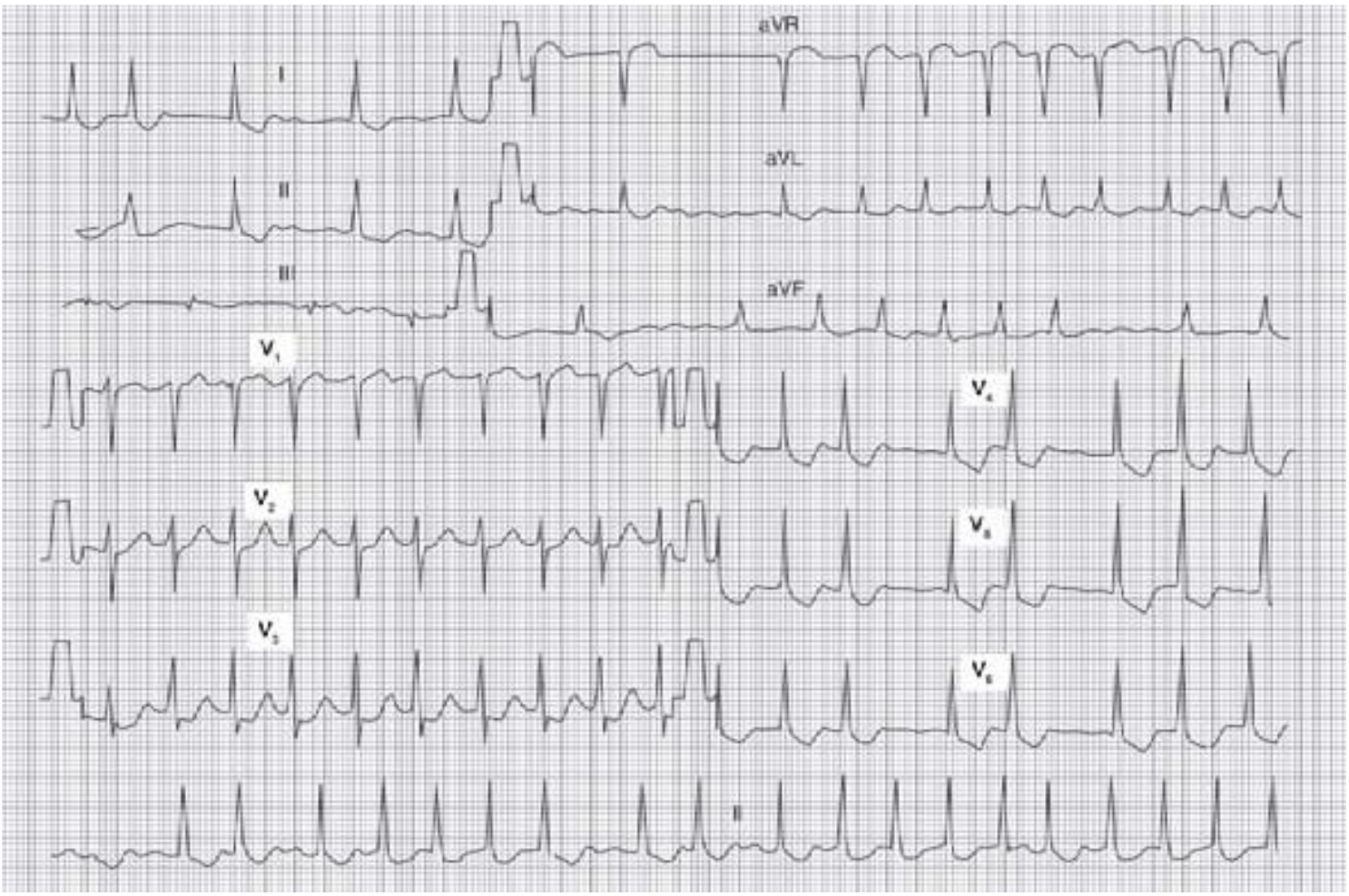


This ECG shows:

- Tall P in lead II and III (P pulmonale).
- Old Q in lead II, III and aVF.
- Tall R in V1.
- Poor R wave progression in V5 and V6.

Diagnosis: Right atrial hypertrophy (P pulmonale) with right ventricular hypertrophy with old inferior myocardial infarction.

QUESTION 8

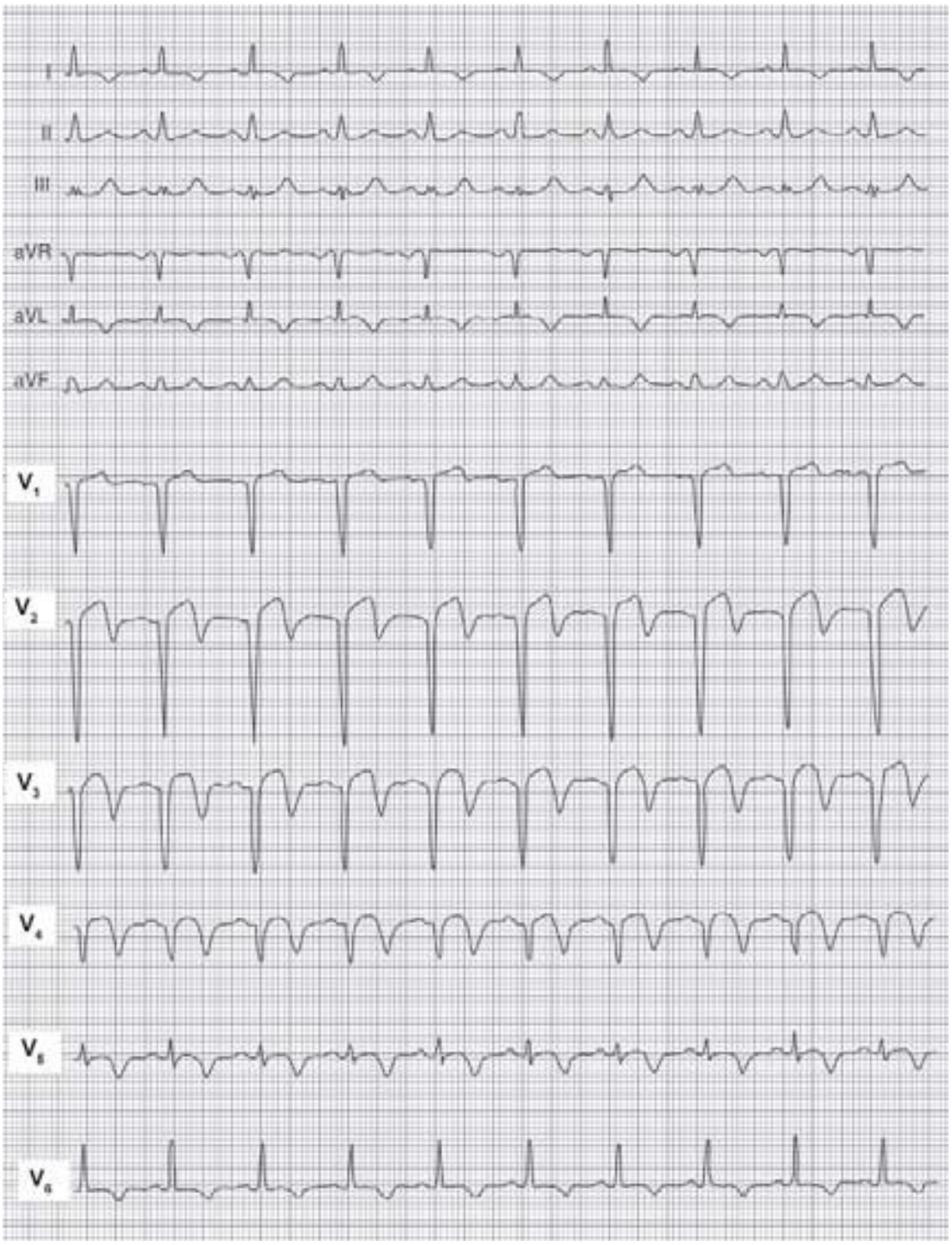


This ECG shows:

- P wave — absent.
- Rhythm is irregular (R-R interval is irregular).
- ST depression in lead I, II, V4 to V6 (thumb impression or reversed tick appearance).

Diagnosis: Atrial fibrillation with digoxin effect.

QUESTION 9

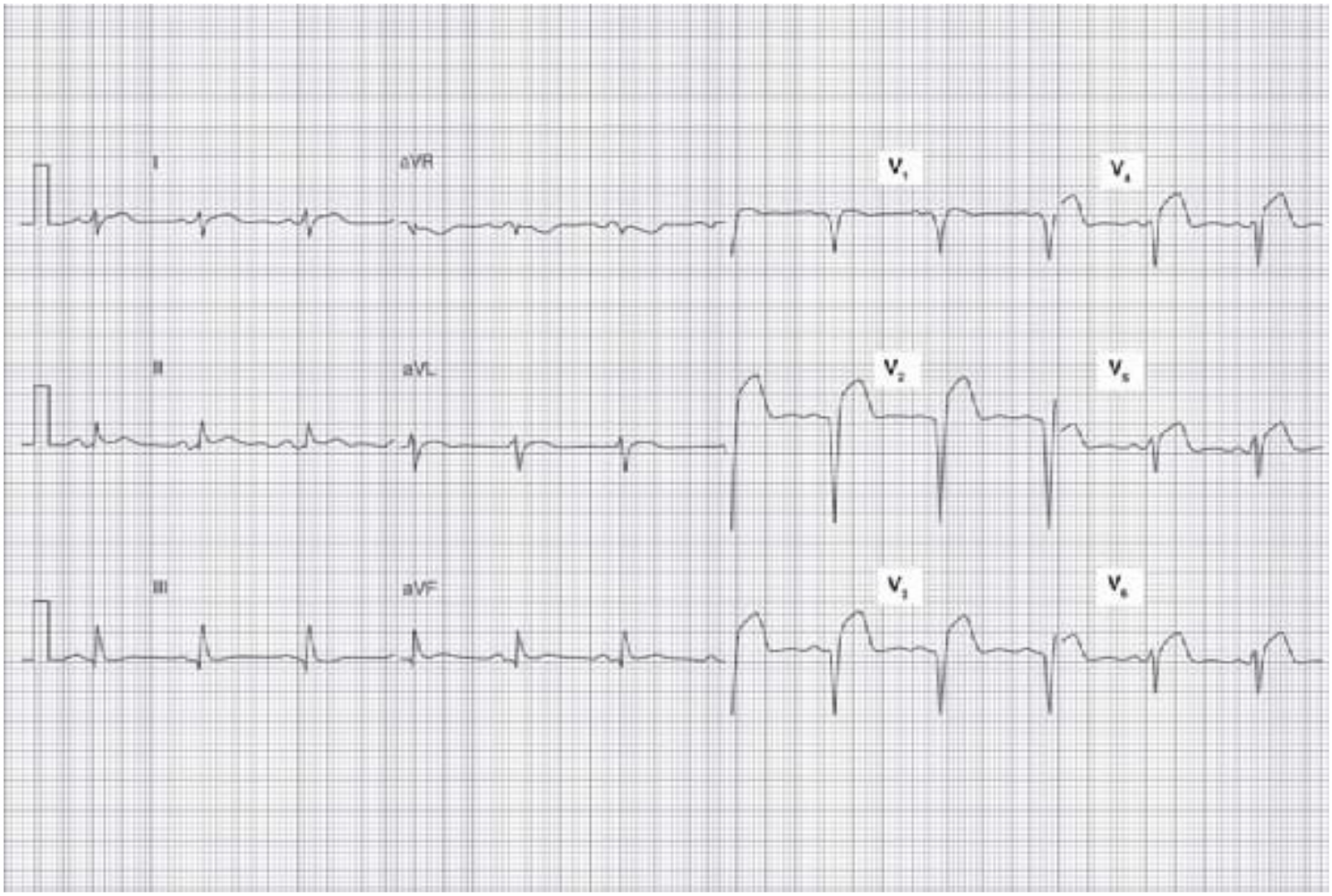


This ECG shows:

- ST elevation in V2 to V4.
- Pathological Q in V1 to V4.
- T inversion in lead I, aVL, V2 to V6.

Diagnosis: Acute anteroseptal myocardial infarction.

QUESTION 10

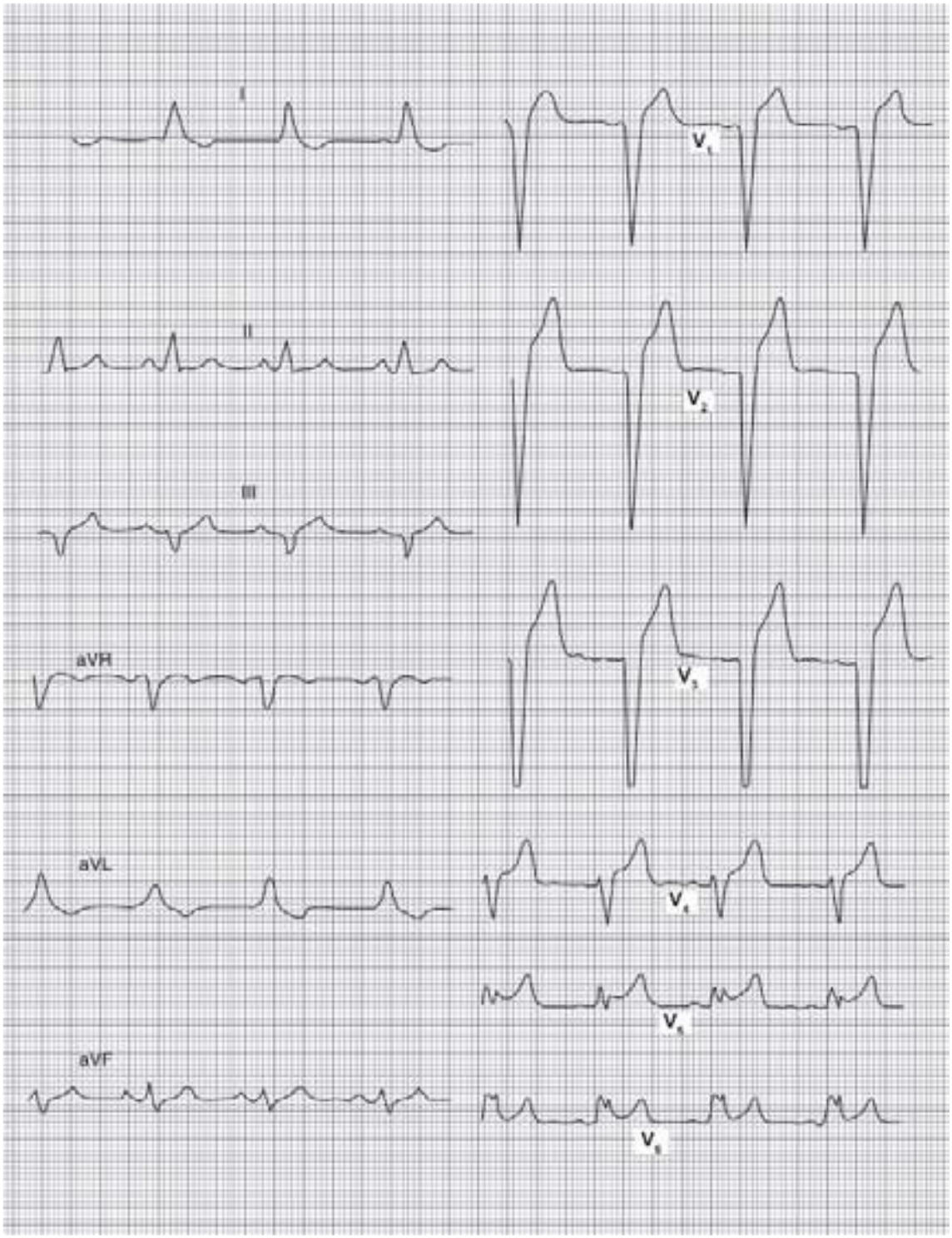


This ECG shows:

- ST elevation in V2 to V6.
- Pathological Q in V1 to V6.

Diagnosis: Acute extensive anterior myocardial infarction

QUESTION 11

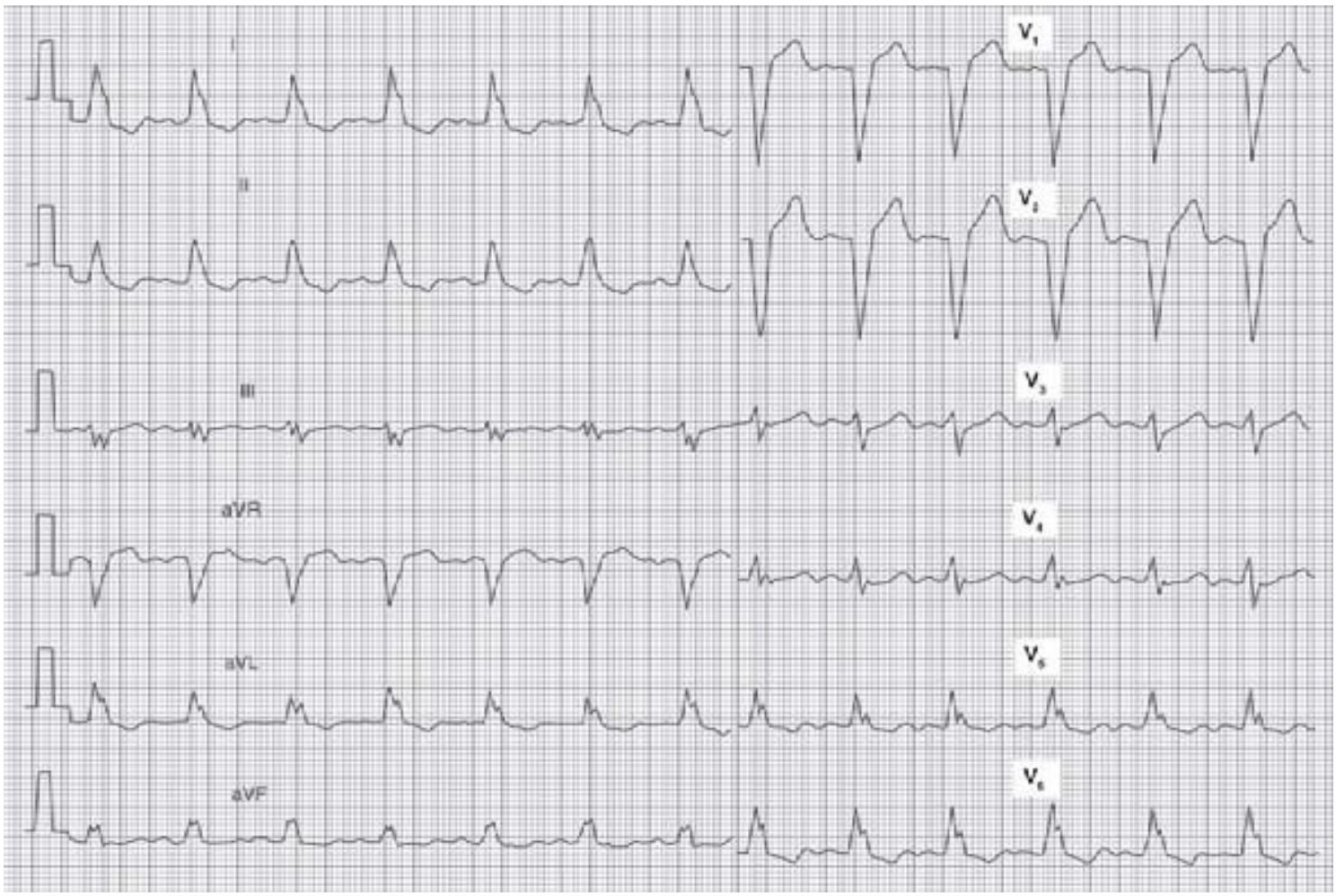


This ECG shows:

- M pattern (RSR pattern) in V5 to V6.
- QRS—wide (0.16 seconds).
- Pathological Q in V1 to V3 (maybe old anteroseptal myocardial infarction).

Diagnosis: Left bundle branch block.

QUESTION 12

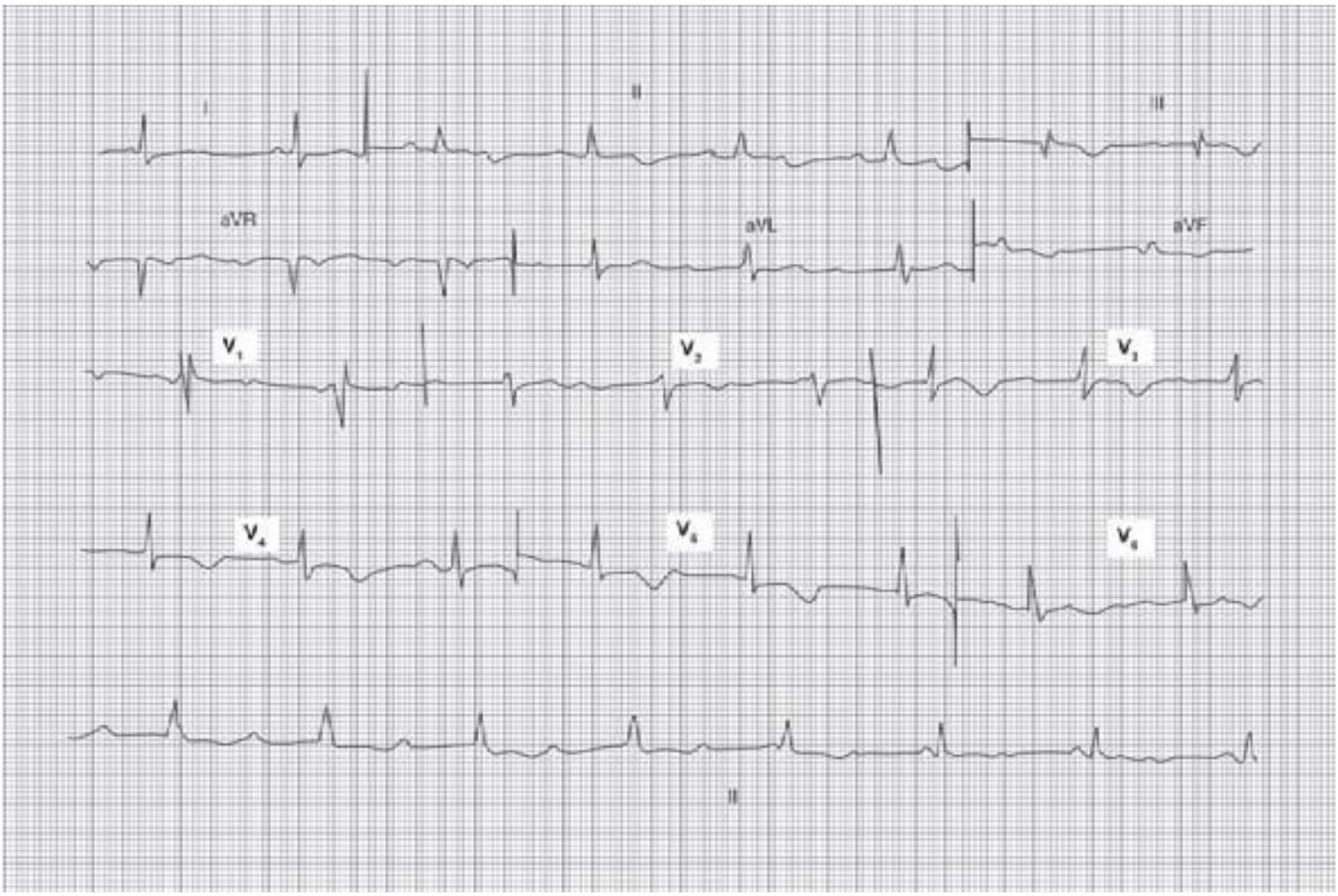


This ECG shows:

- M pattern (RSR pattern) in V5 to V6.
- QRS—wide (0.16 second).
- Pathological Q in V1 to V2 (may be old myocardial infarction).

Diagnosis: Left bundle branch block.

QUESTION 13

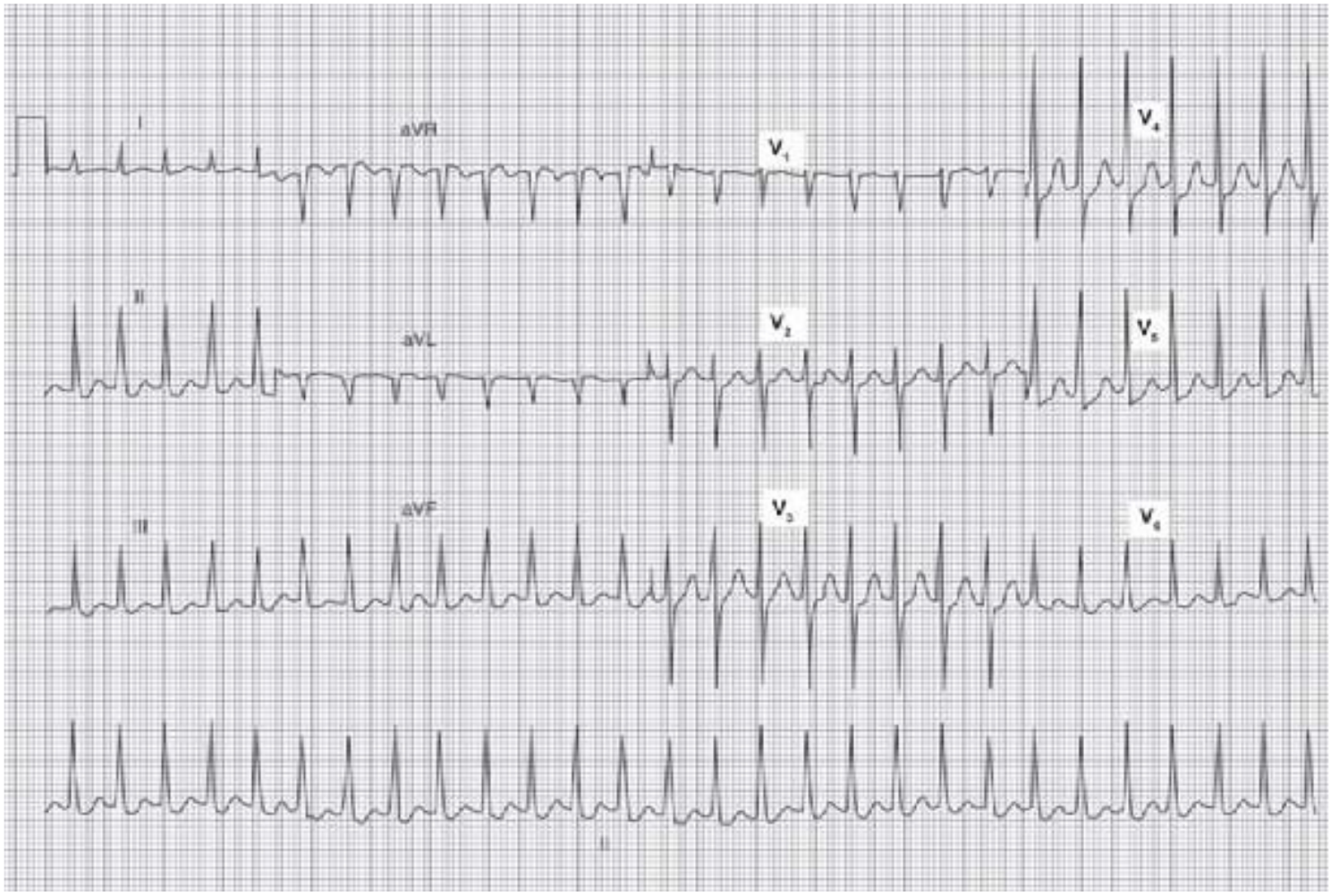


This ECG shows:

- PP interval–120/min, regular.
- RR interval—58/min, regular.
- There is a dissociation between P and QRS.

Diagnosis: Complete heart block.

QUESTION 14

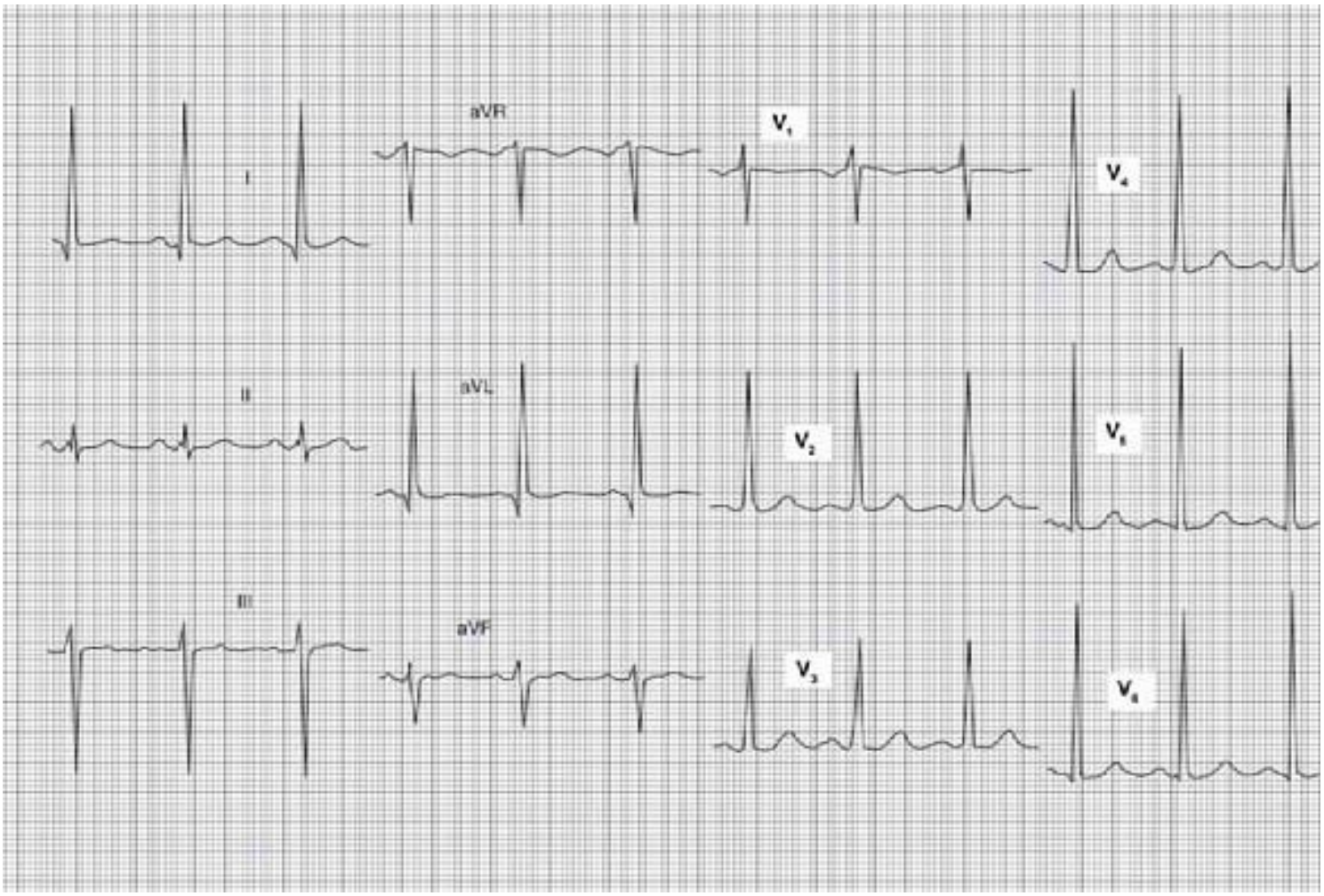


This ECG shows:

- Heart rate—180/min.
- P wave is absent.
- QRS is normal and narrow.
- Rhythm—regular.

Diagnosis: Supraventricular tachycardia.

QUESTION 15

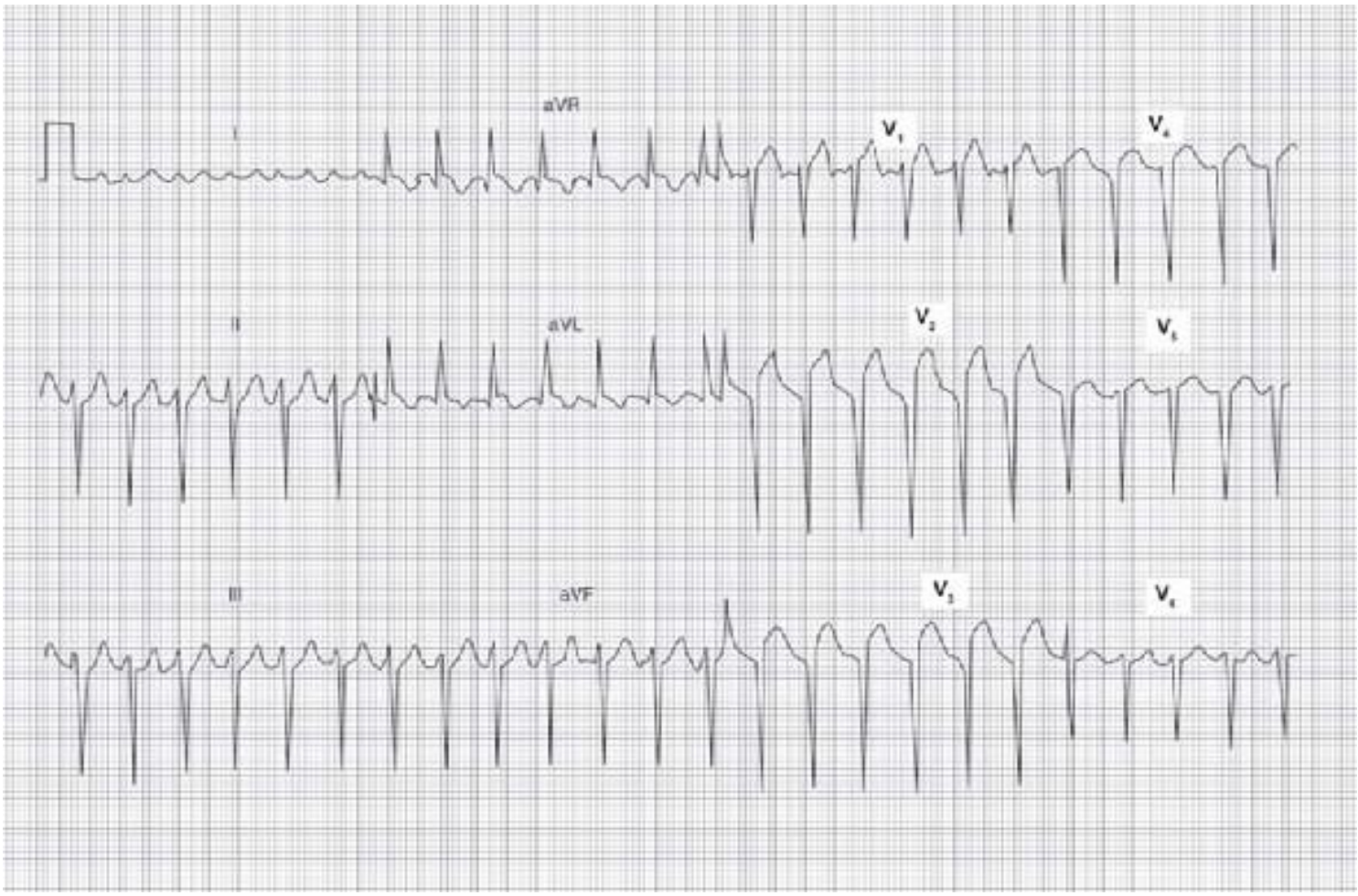


This ECG shows:

- Tall R in lead I, deep S in lead III (indicates left axis deviation).
- Tall R in aVL (> 11 mm), tall R in V5 (> 25 mm).
- S V1 + R V6 > 35 mm (here it is 38 mm).

Diagnosis: Left ventricular hypertrophy.

QUESTION 16

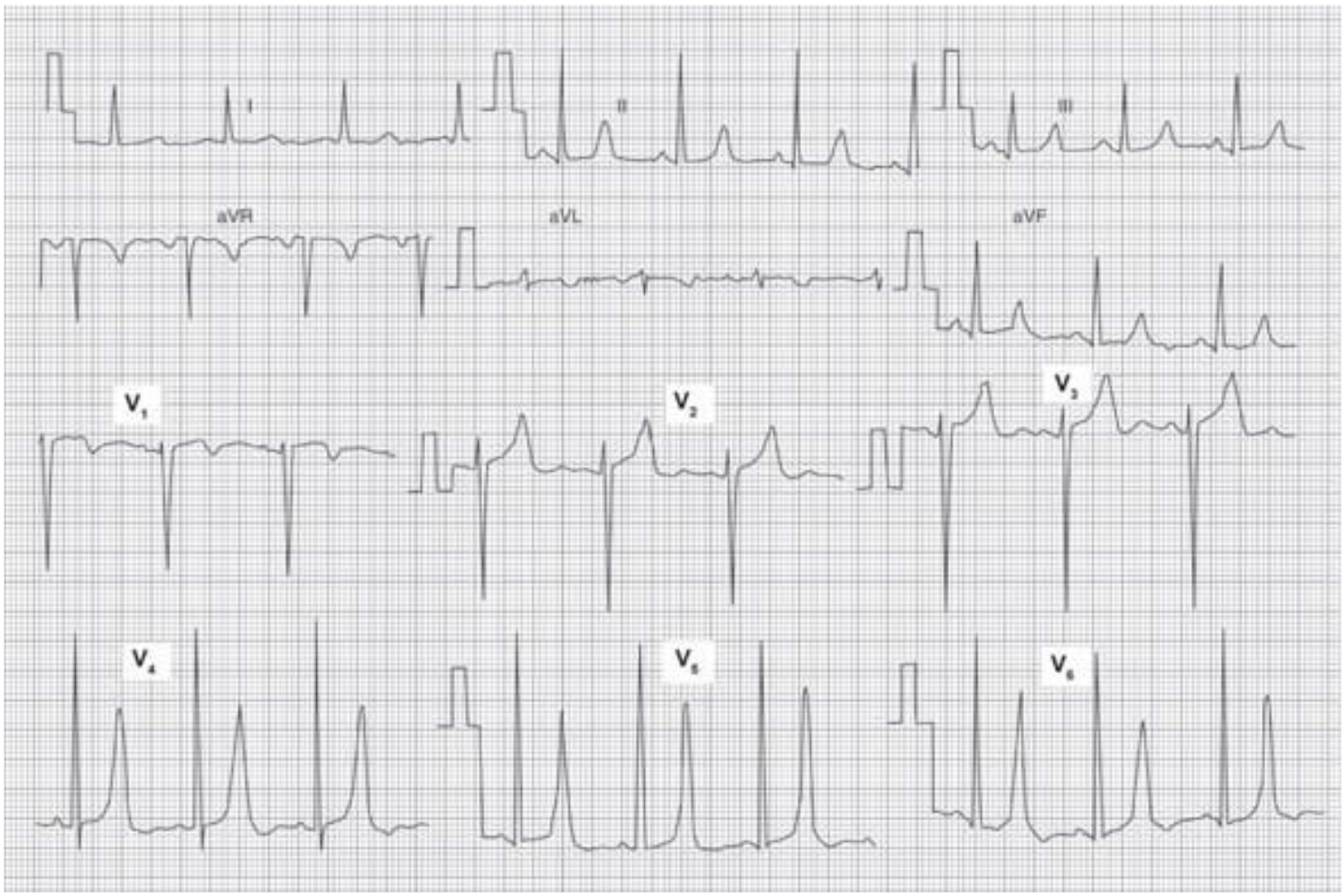


This ECG shows:

- Heart rate is 150/min.
- P—absent.
- QRS—normal.
- Pathological Q in V2 to V4 and ST elevation.
- Deep S in V5 and V6 with poor R wave progression.
- Rhythm is regular.

Diagnosis: Acute anteroseptal myocardial infarction with supraventricular tachycardia.

QUESTION 17

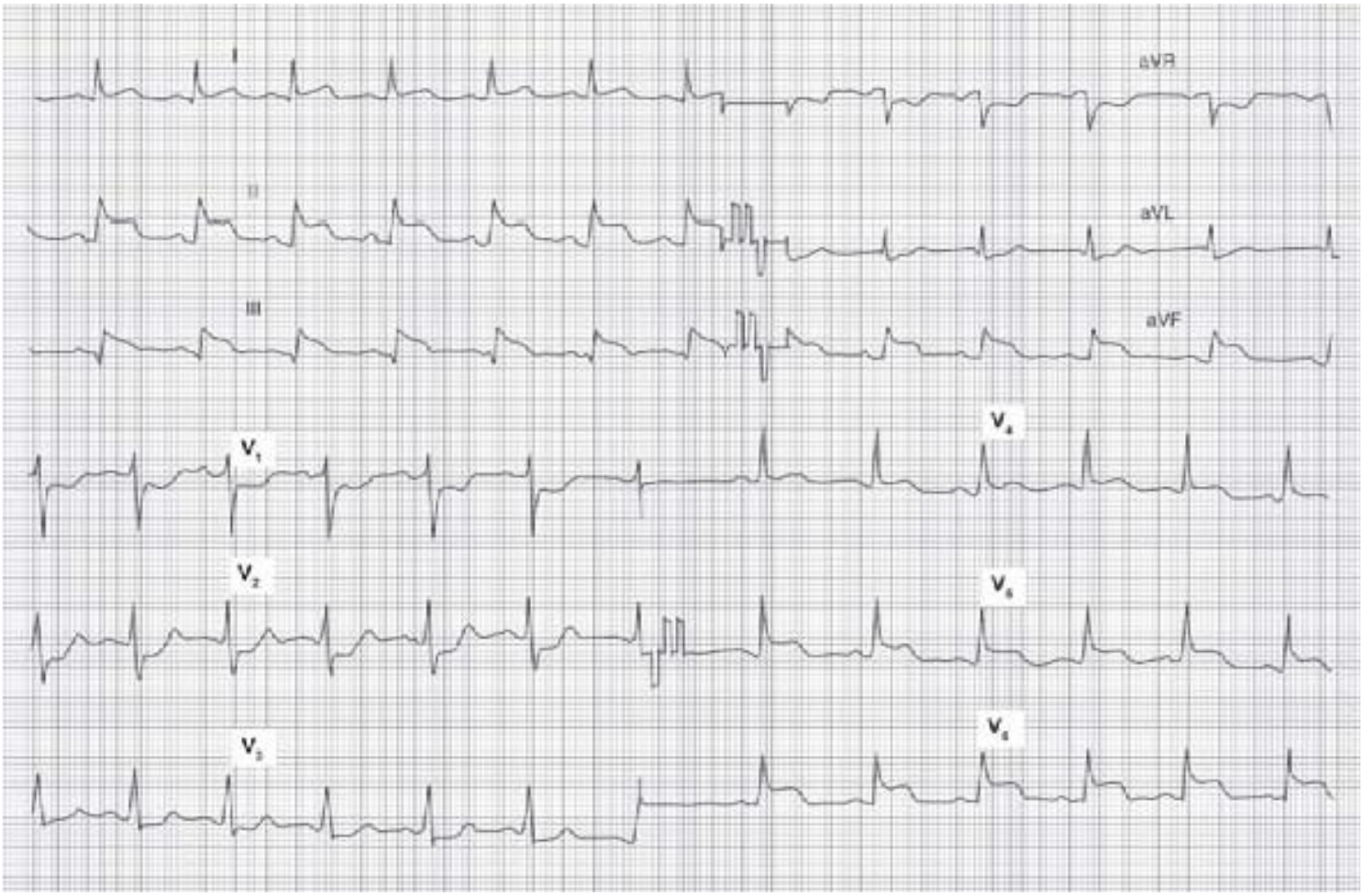


This ECG shows:

- S V1 + R V6 > 35 mm (here it is 50).
- Tall peaked T wave in V4 to V6.
- There is also tall R in V5.

Diagnosis: Left ventricular hypertrophy with probable hyperkalemia (tall peak T).

QUESTION 18

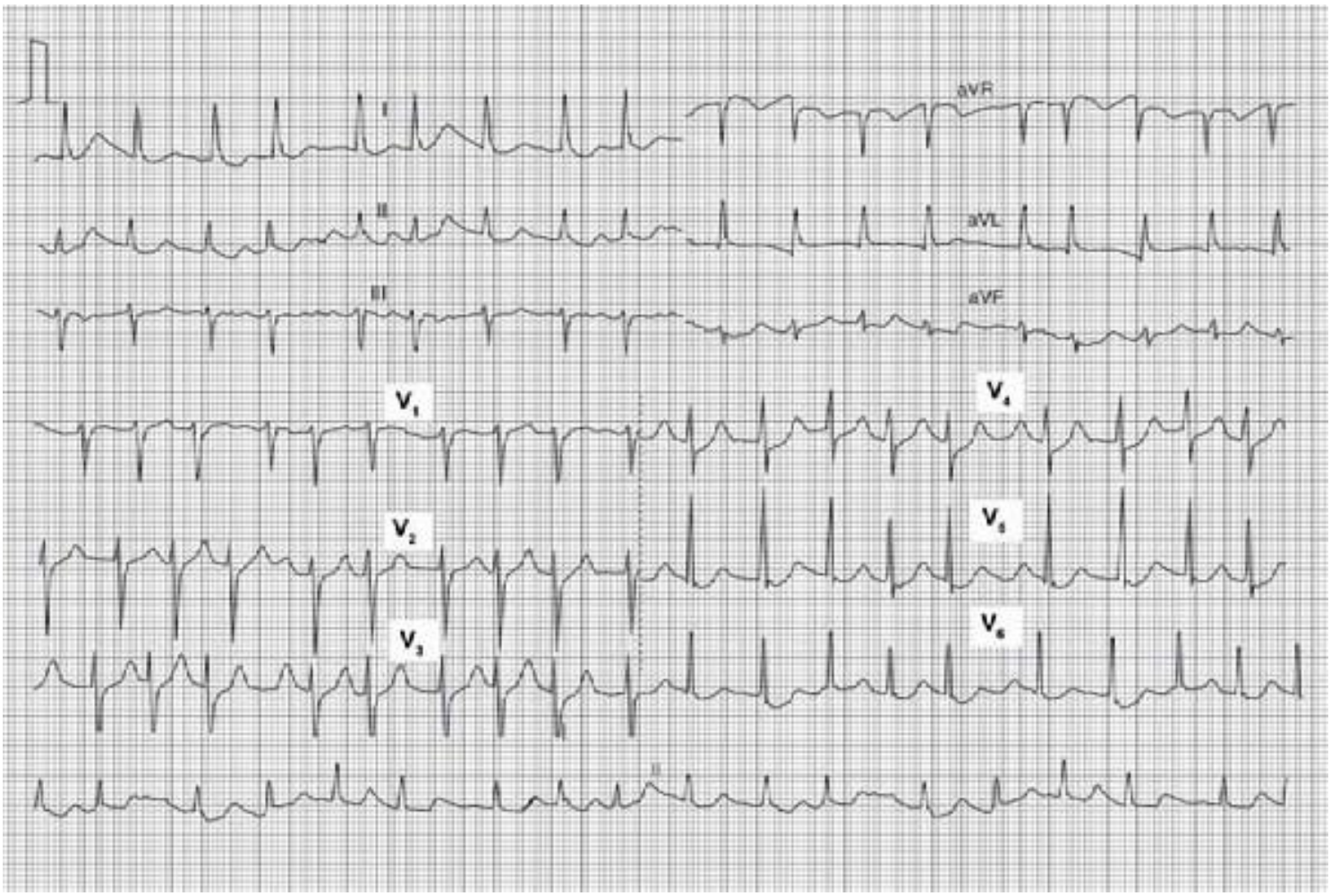


This ECG shows:

- ST elevation in lead II, III and aVF and also in V5 and V6.

Diagnosis: Acute inferior and lateral myocardial infarction.

QUESTION 19

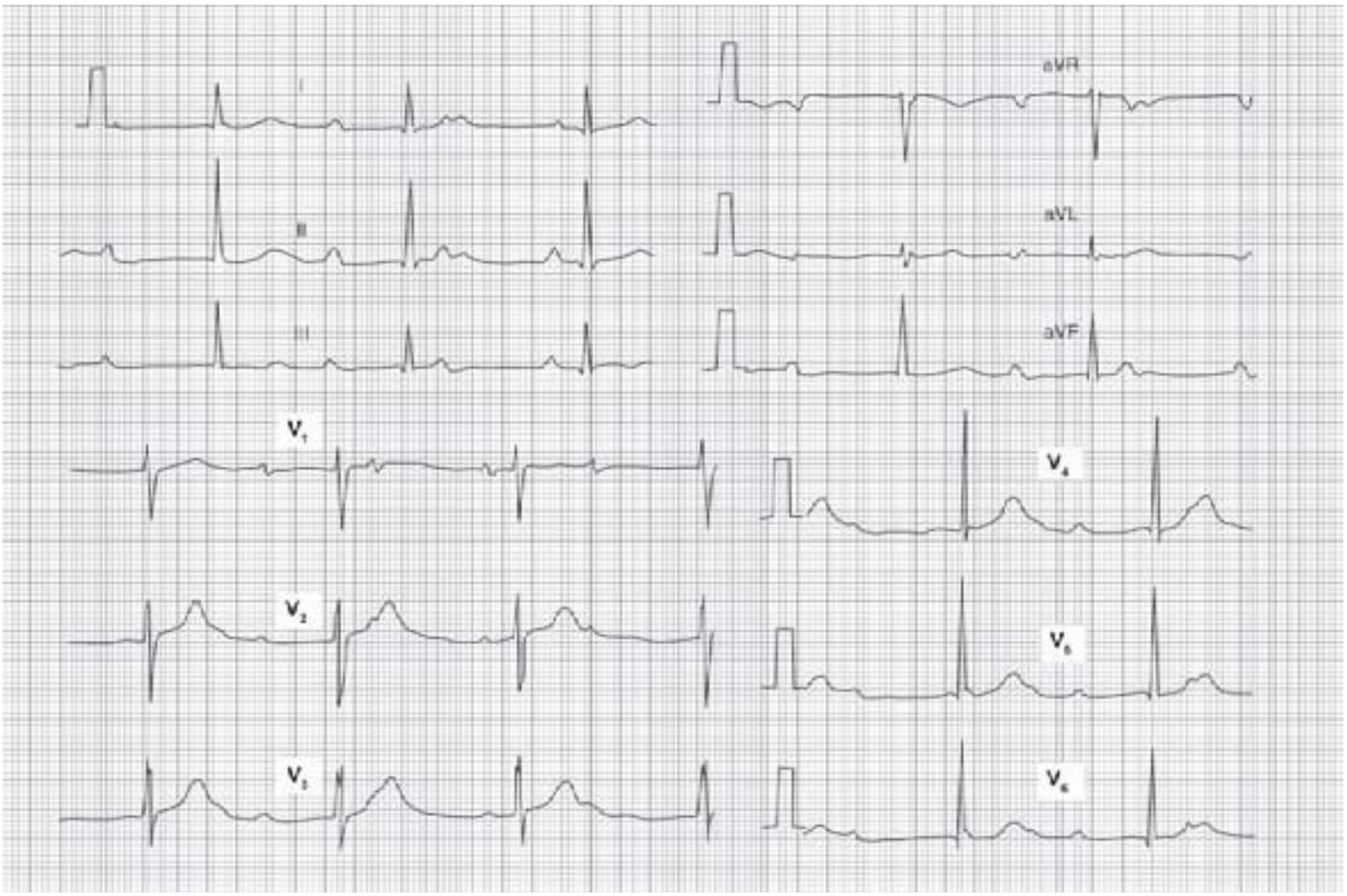


This ECG shows:

- P—absent.
- Rhythm—irregular.
- Heart rate—110/min.

Diagnosis: Fast atrial fibrillation.

QUESTION 20

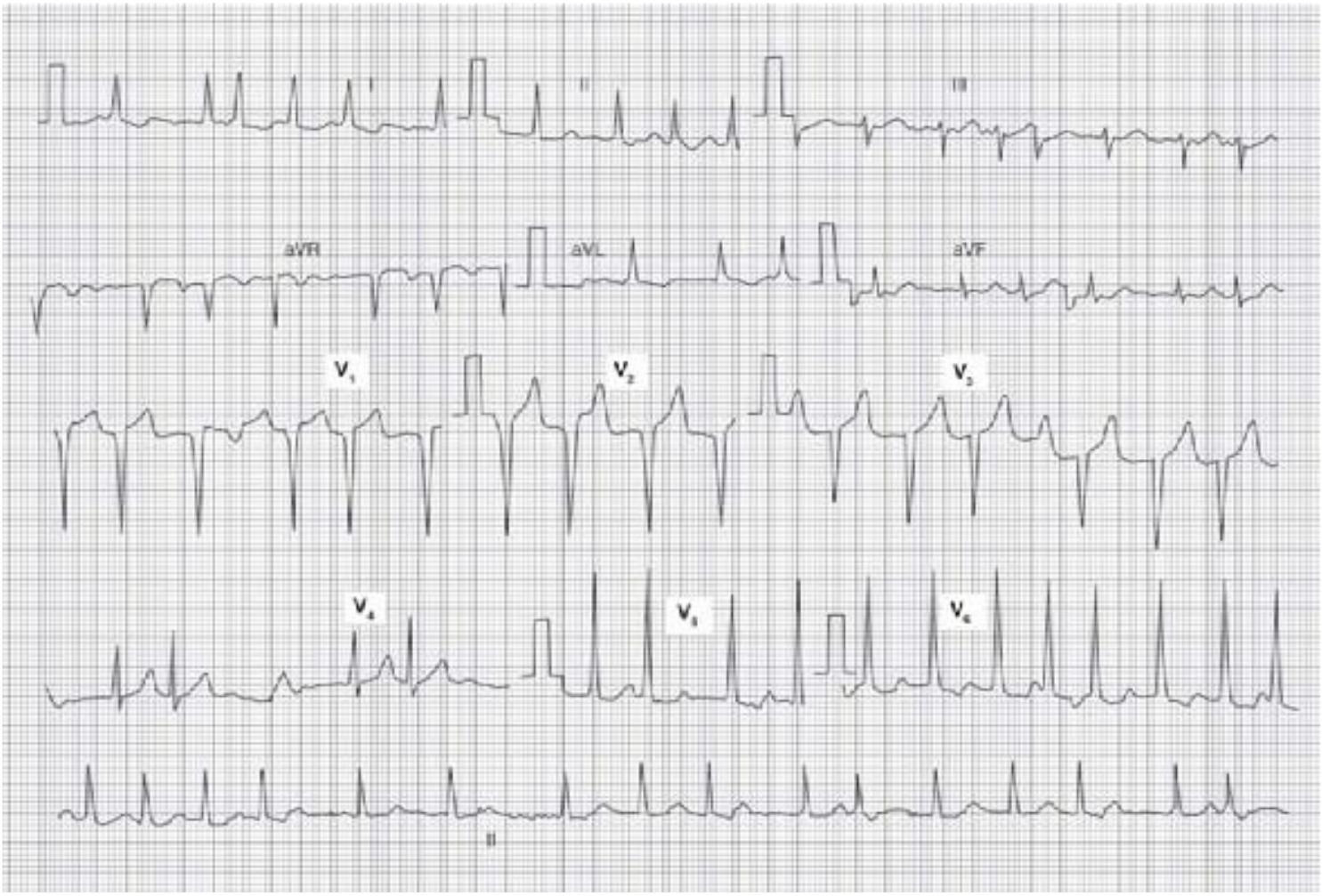


This ECG shows:

- Atrial rate (P-P interval)—75/min.
- Ventricular rate (R-R interval)—50/min.
- Complete dissociation between atria and ventricle.

Diagnosis: Complete heart block.

QUESTION 21

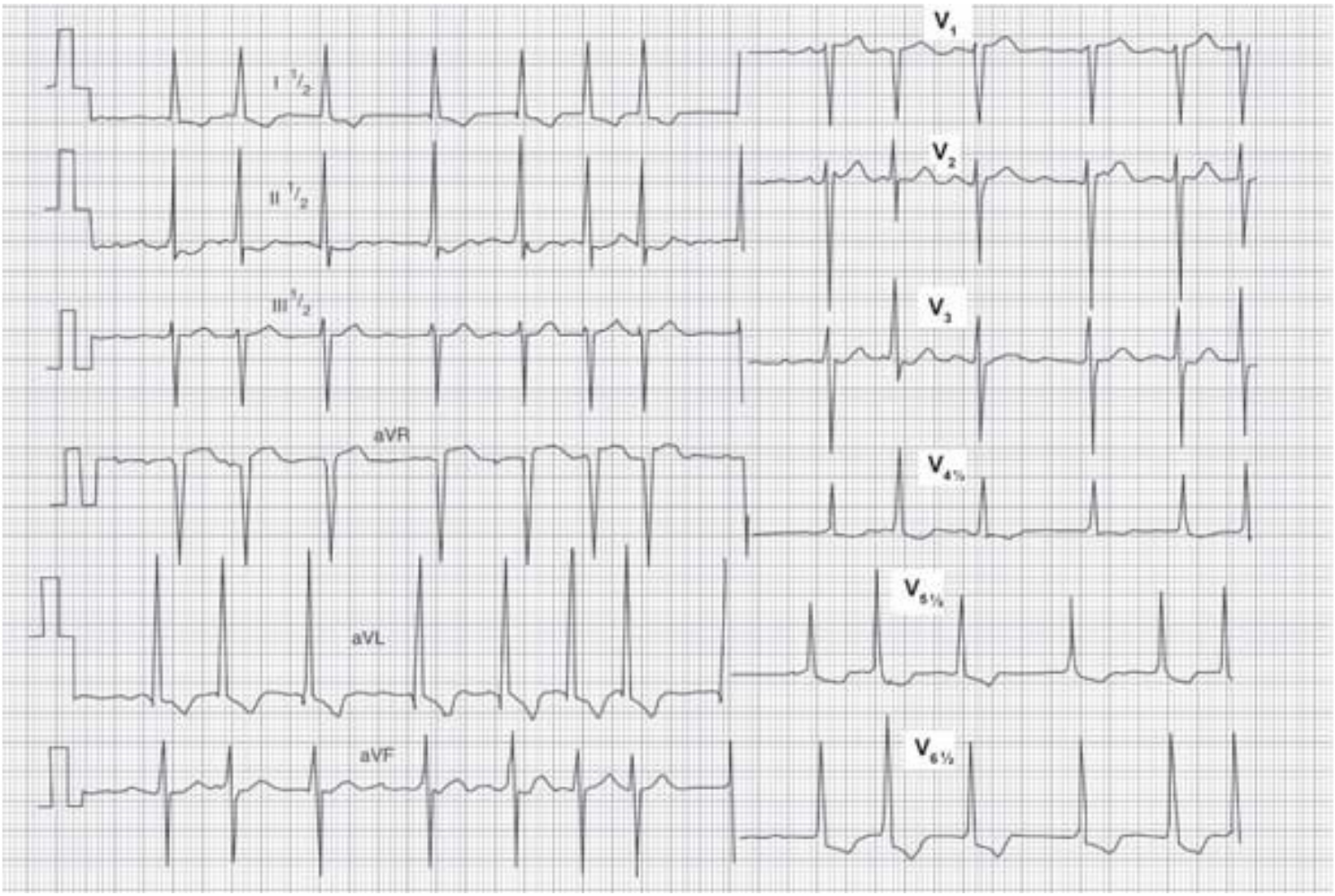


This ECG shows:

- P—absent.
- Rhythm—irregular.
- Pathological Q in V1 to V3.

Diagnosis: Old anteroseptal myocardial infarction with atrial fibrillation.

QUESTION 22

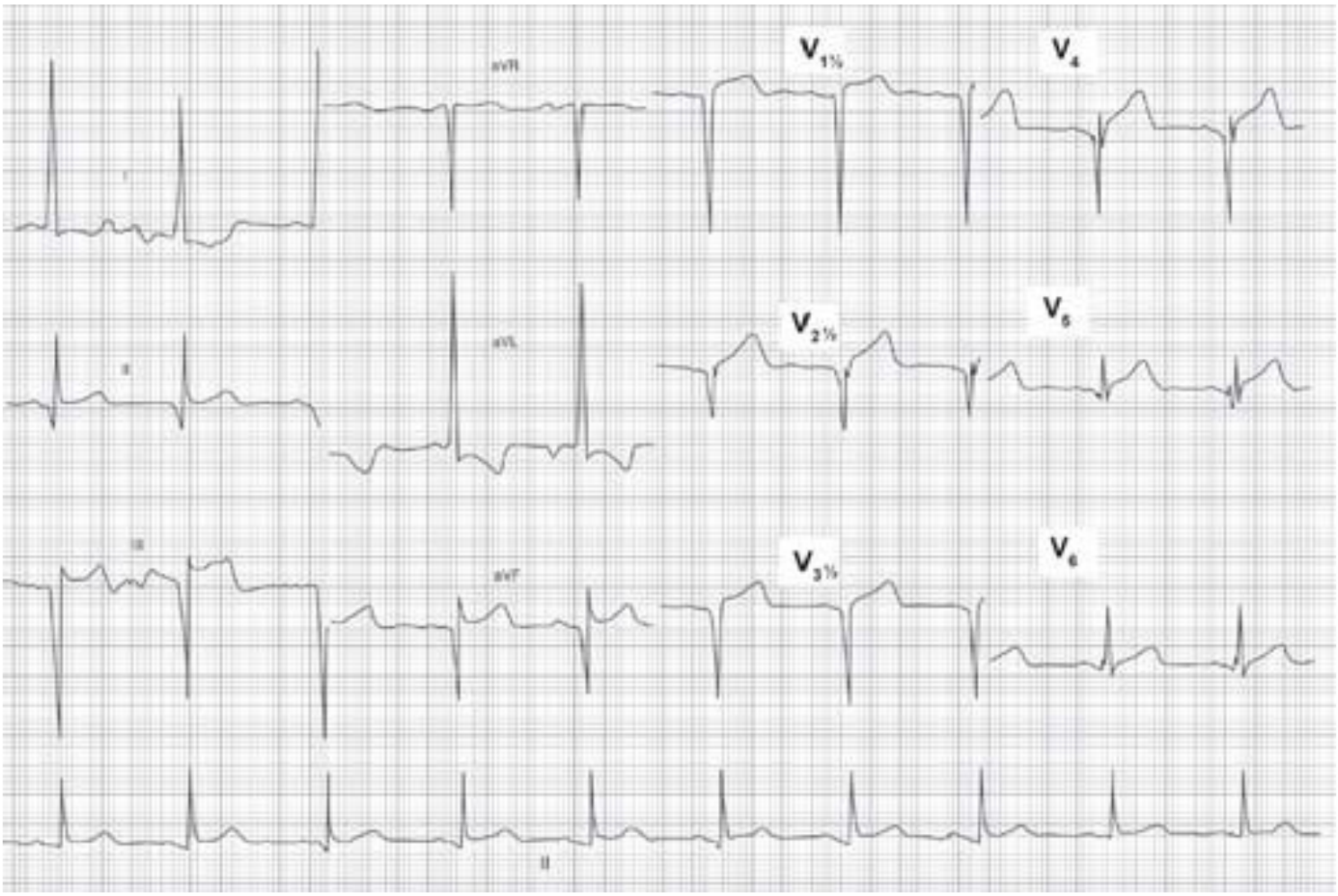


This ECG shows:

- P—absent.
- Rhythm—irregular.
- ST depression in lead I, aVL, V5 and V6.
- S V1+ R V6 > 35 (note the half voltage in V4 to V6).

Diagnosis: Atrial fibrillation with left ventricular hypertrophy with strain.

QUESTION 23

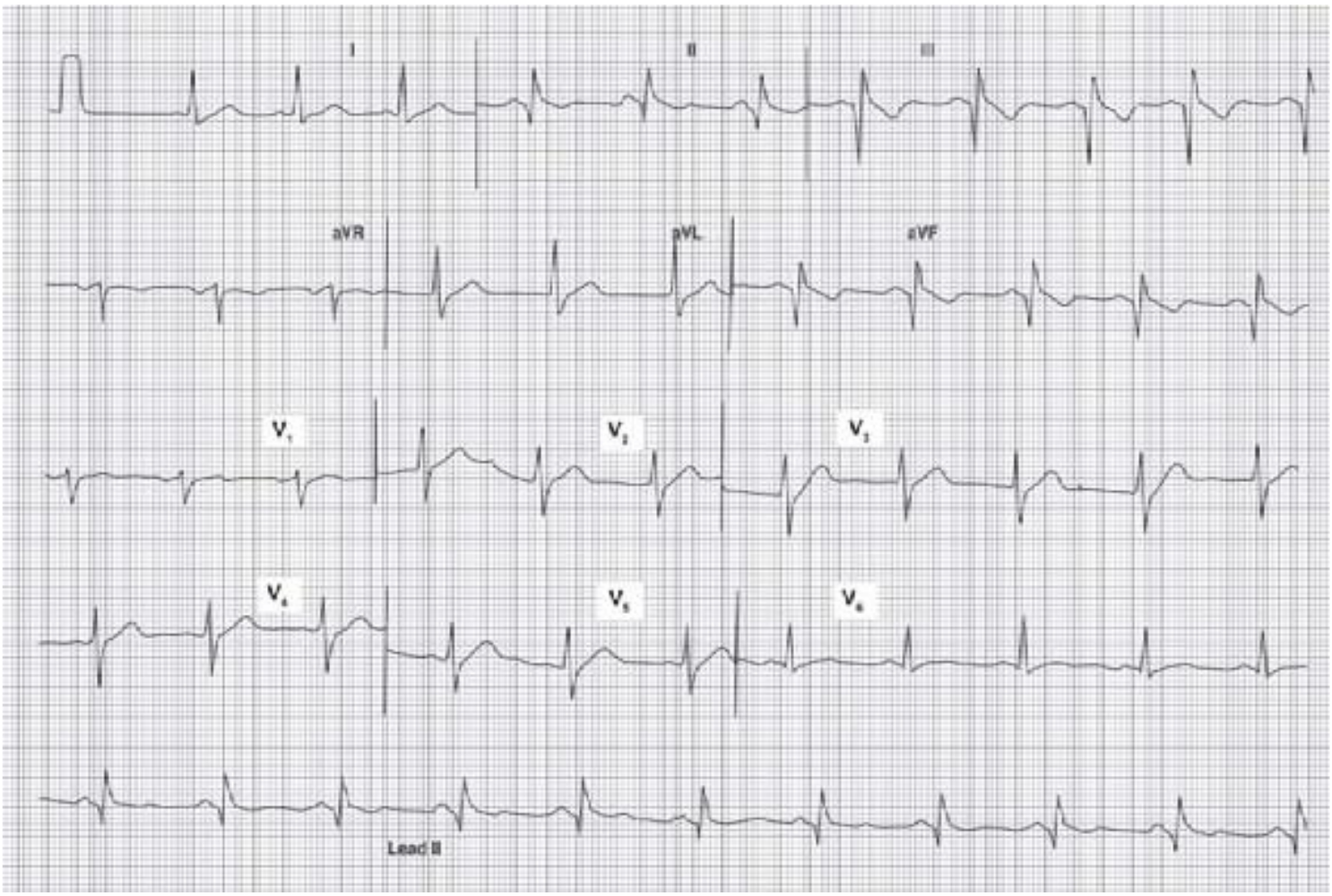


This ECG shows:

- Pathological Q with ST elevation in lead II, III and aVF.
- Pathological Q in V1 to V4.
- Tall R in aVL (>13 mm).

Diagnosis: Acute inferior and old anteroseptal myocardial infarction with left ventricular hypertrophy.

QUESTION 24

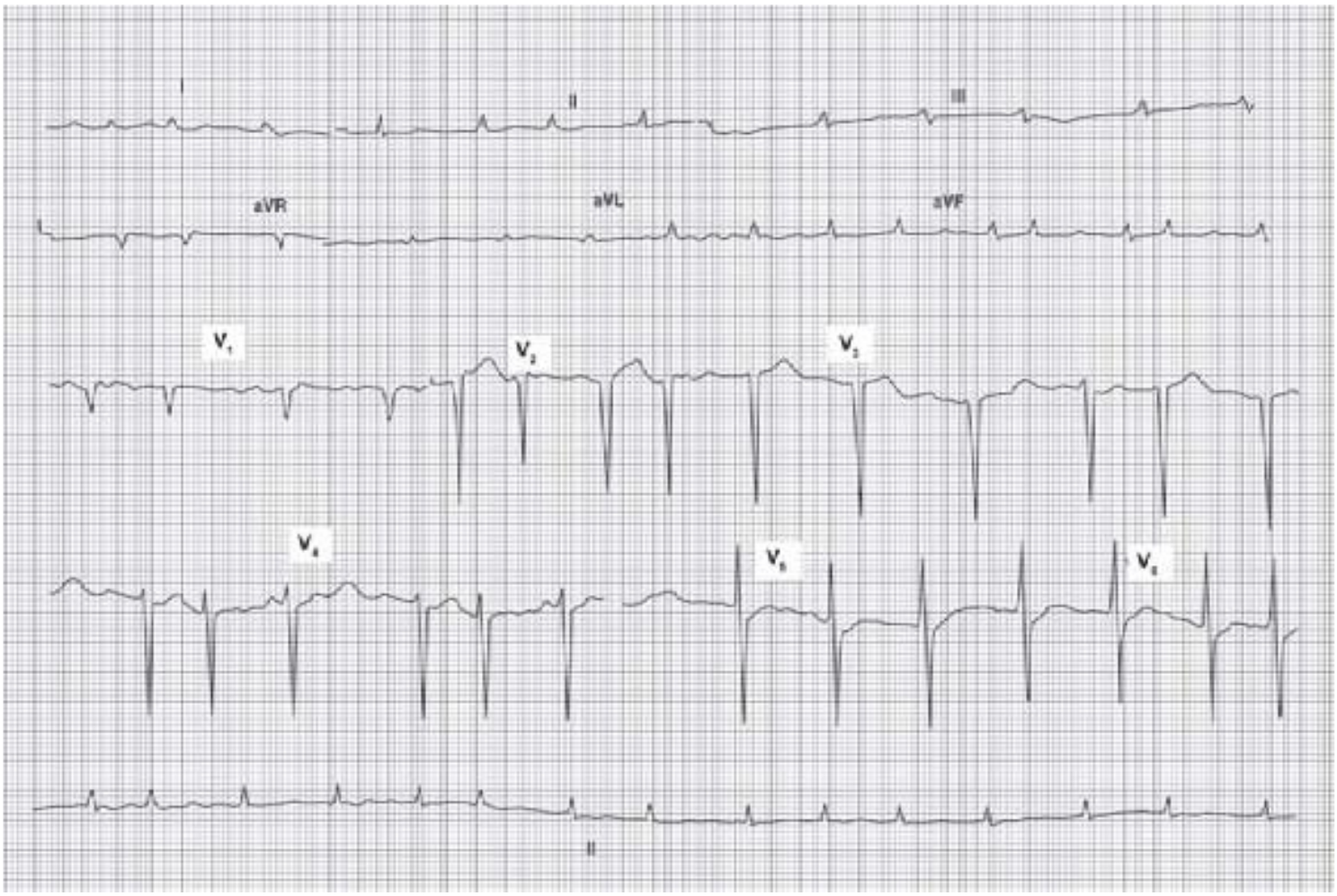


This ECG shows:

- Pathological Q with ST elevation in lead II, III and aVF.
- T inversion in lead II, III and aVF.

Diagnosis: Acute inferior myocardial infarction.

QUESTION 25

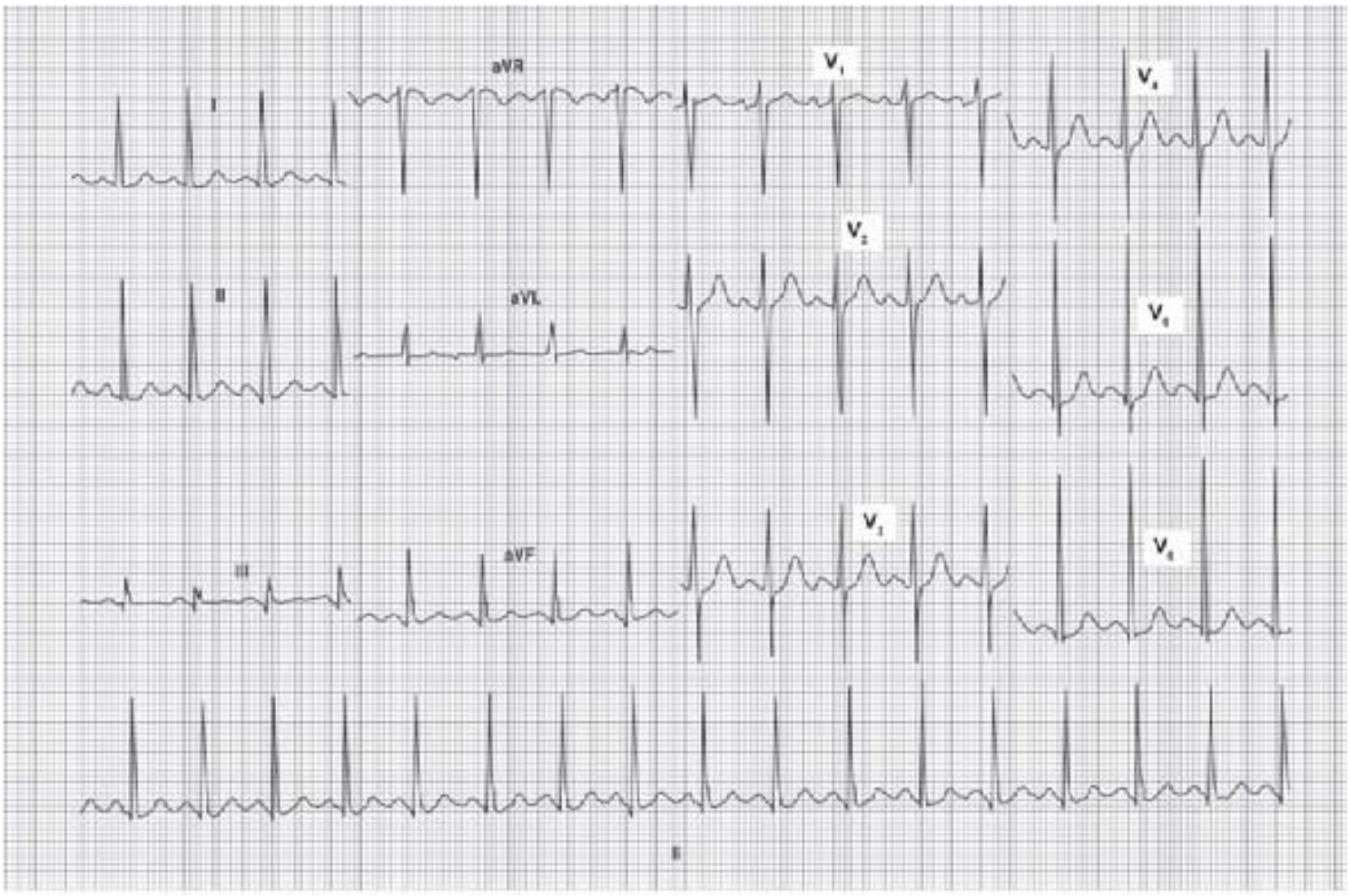


This ECG shows:

- P—absent.
- Rhythm—irregular.
- Pathological Q in V1 to V3.

Diagnosis: Atrial fibrillation with old anteroseptal myocardial infarction.

QUESTION 26

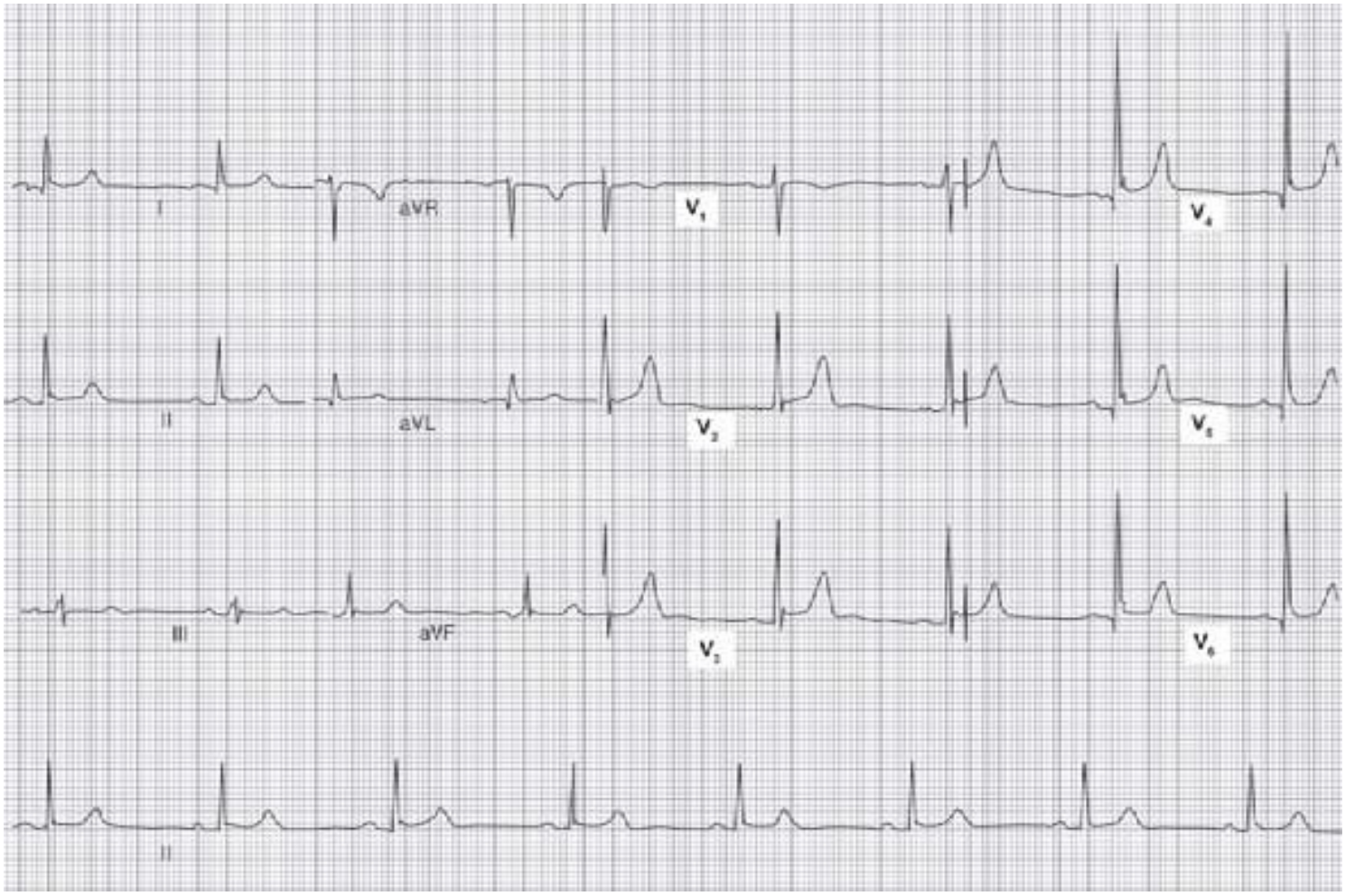


This ECG shows:

- S V1 + R V6 > 35 mm (here it is 48).
- P, QRS, T—normal.
- Heart rate—130/min.
- Rhythm—regular.

Diagnosis: Left ventricular hypertrophy with sinus tachycardia.

QUESTION 27

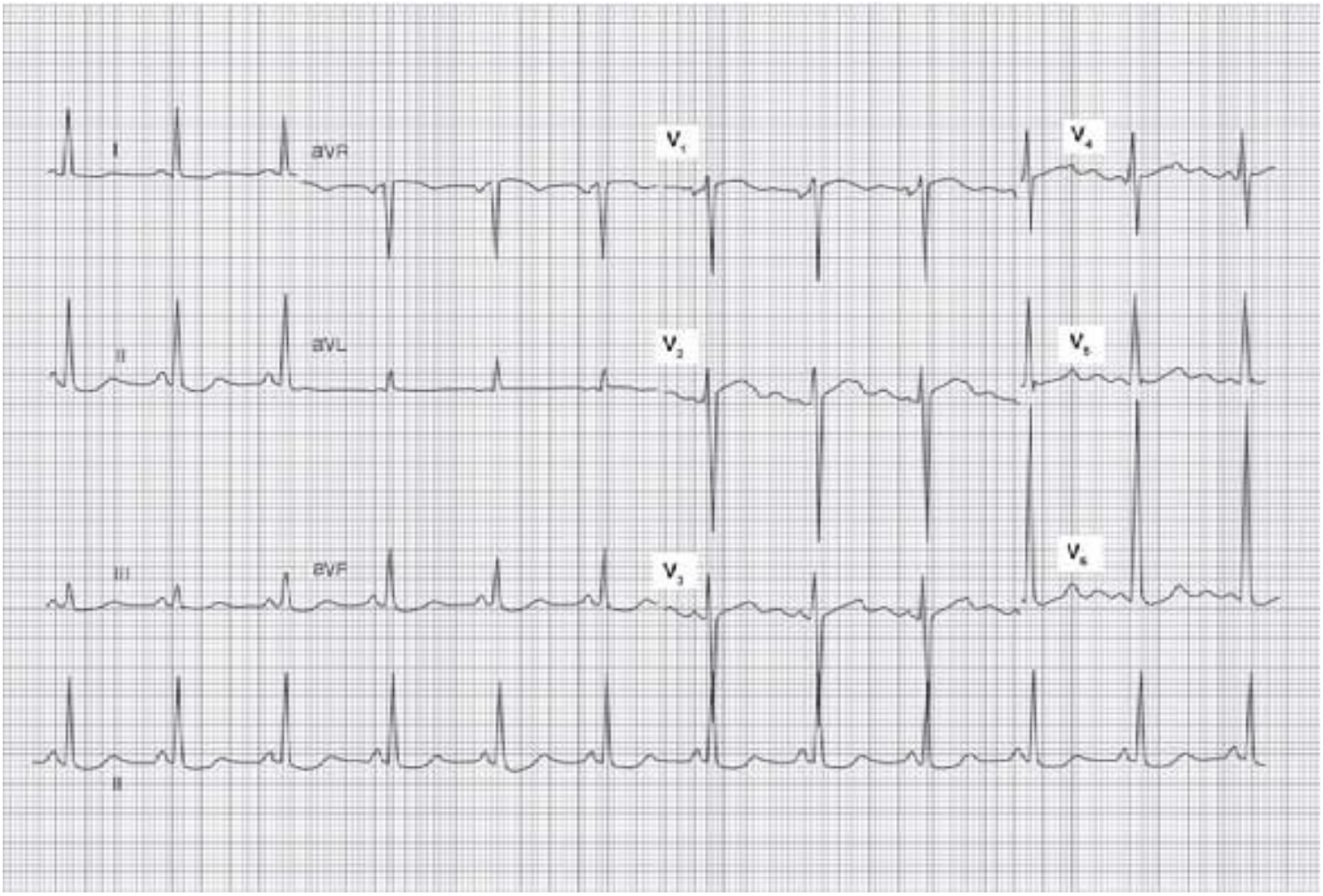


This ECG shows:

- Heart rate—56/min.
- P, QRS, T—normal.
- wave in lead II, V4 to V6.

Diagnosis: Sinus bradycardia.

QUESTION 28

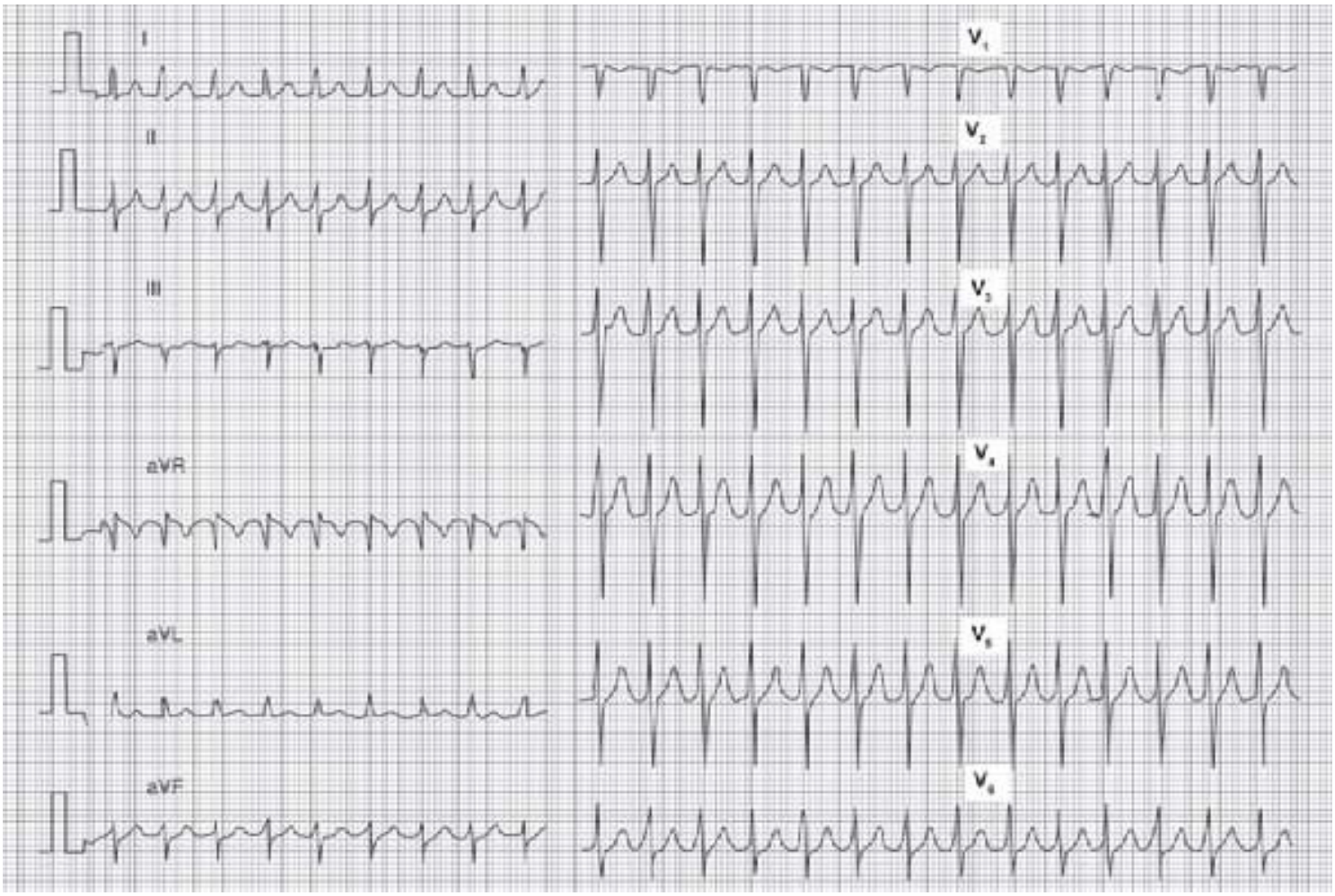


This ECG shows:

- S V1 + R V6 > 35 mm (here it is 48).
- U wave in V2 to V6.

Diagnosis: Left ventricular hypertrophy with hypokalemia

QUESTION 29

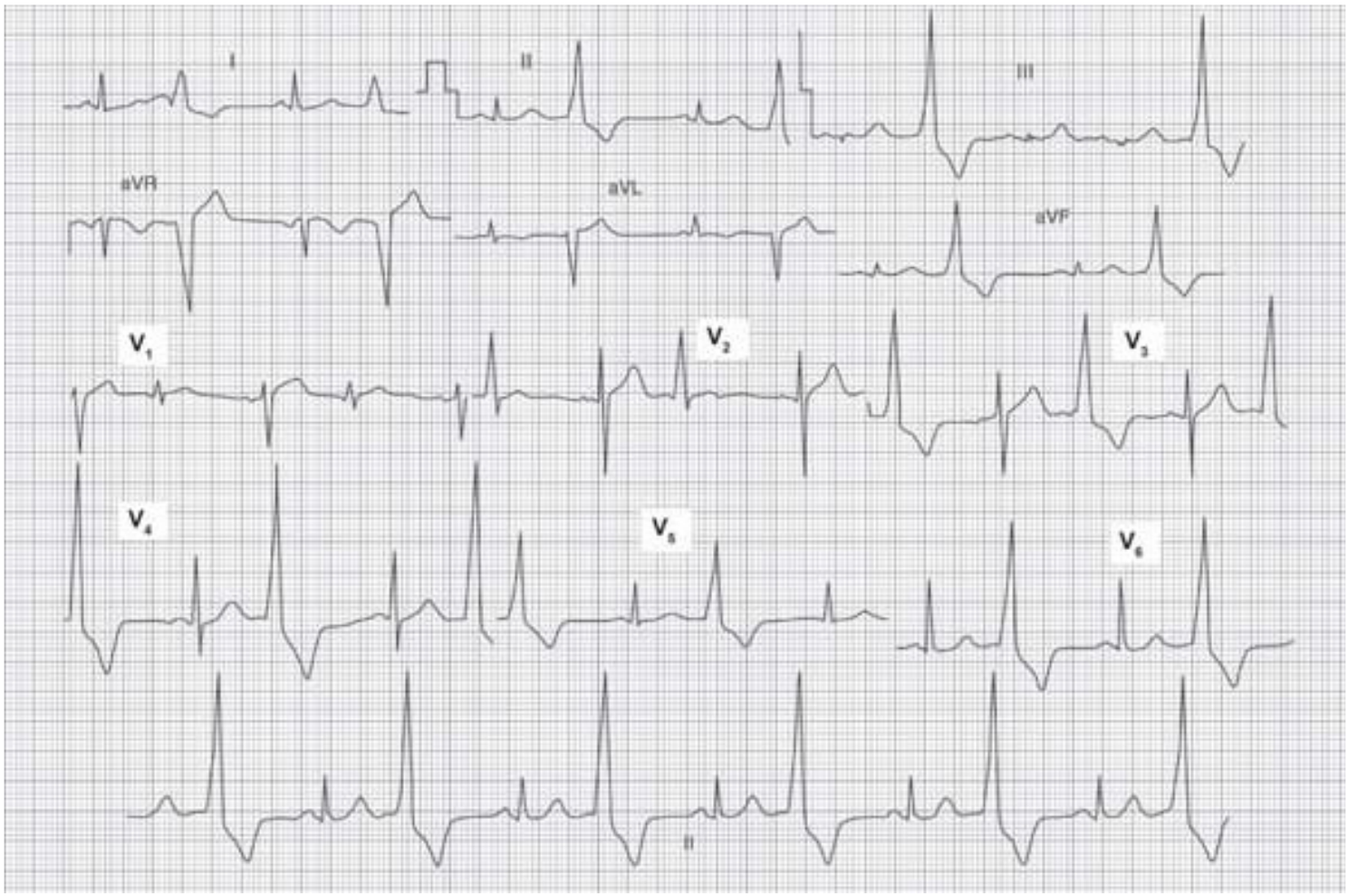


This ECG shows:

- Heart rate—150/min.
- P is absent, but QRS, T—normal.
- Rhythm—regular.

Diagnosis: Supraventricular tachycardia.

QUESTION 30

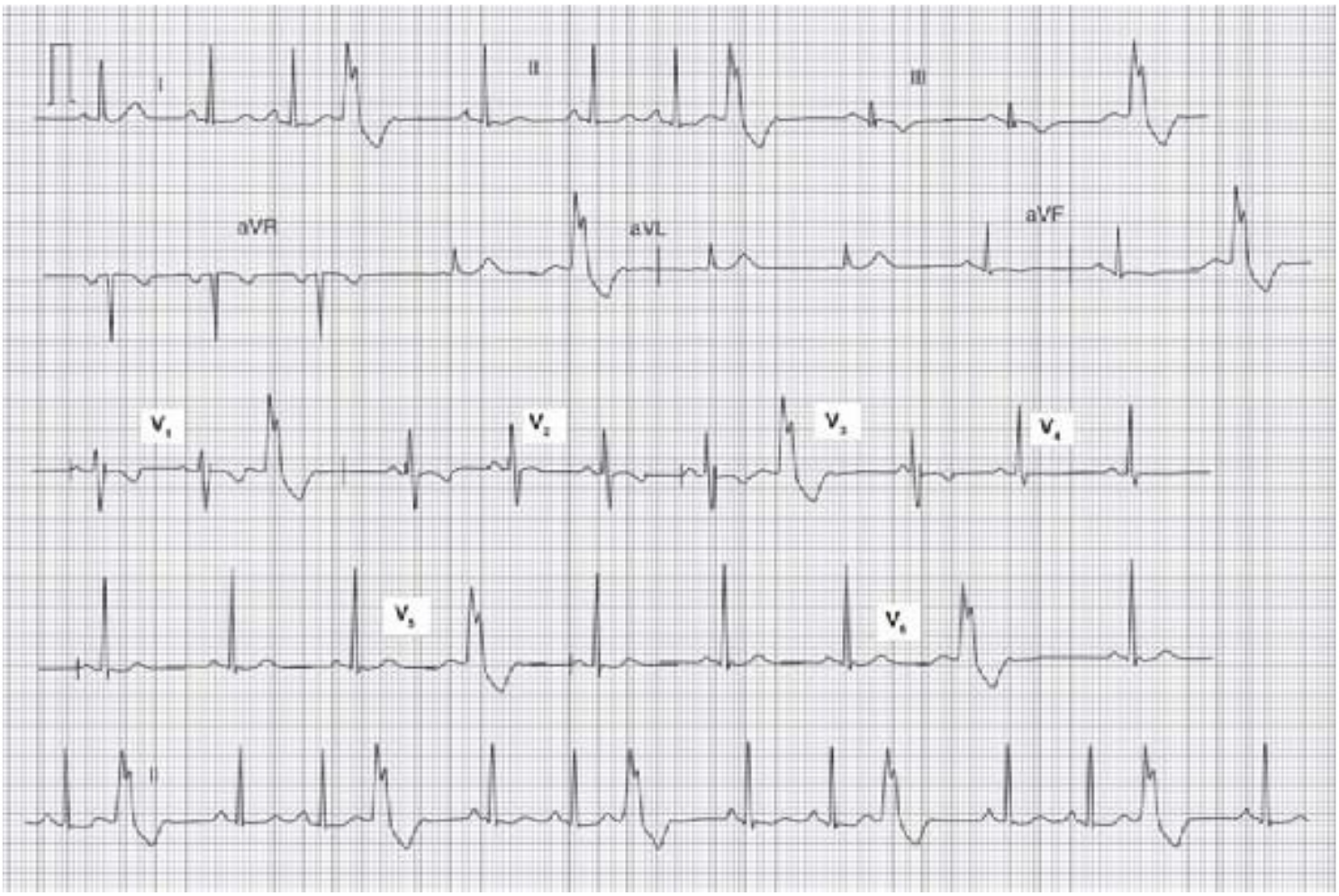


This ECG shows:

- Multiple ventricular ectopics.
- Every normal beat is followed by a ventricular ectopic.

Diagnosis: Ventricular bigeminy.

QUESTION 31

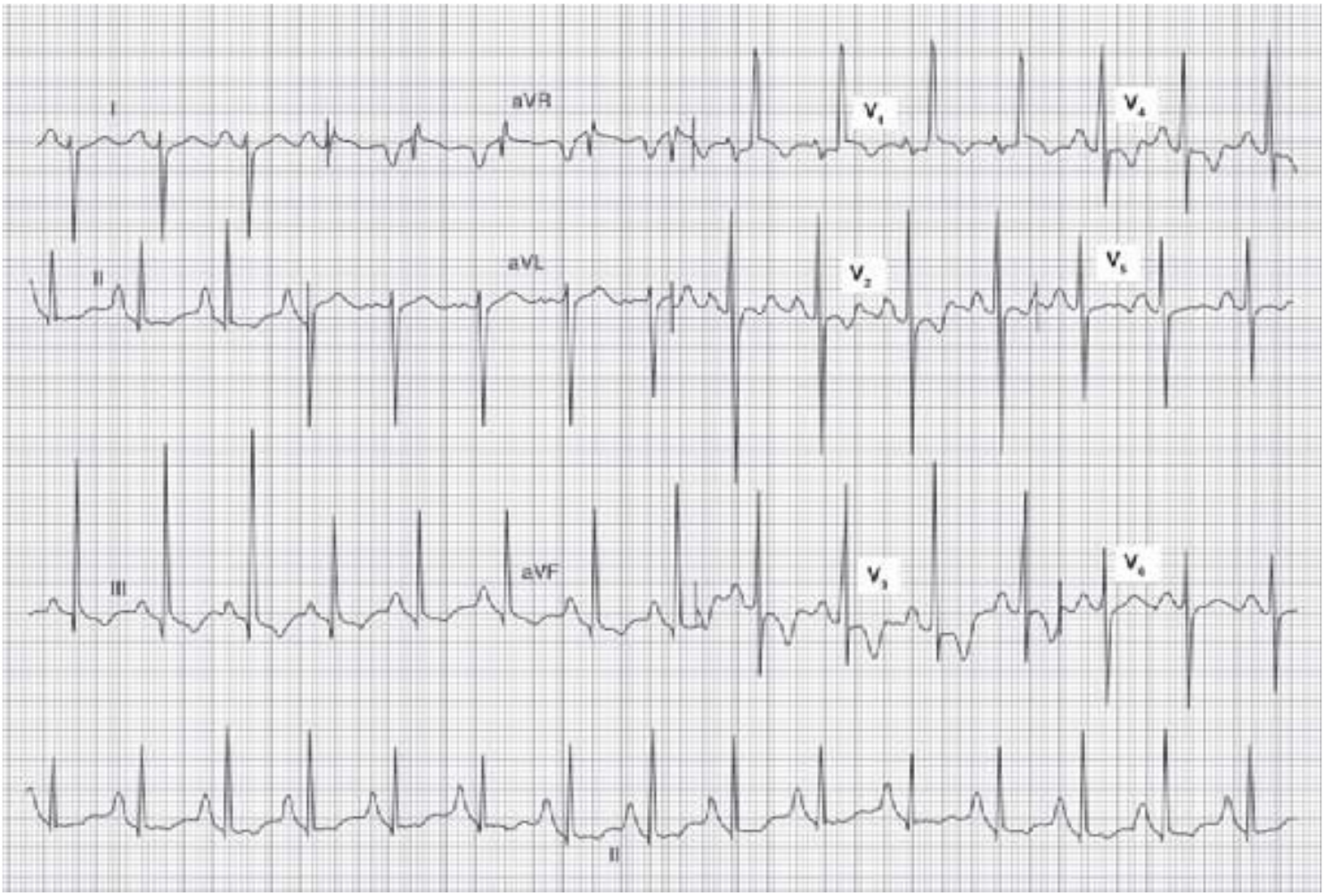


This ECG shows:

- Multiple ventricular ectopics.
- Every two normal beats is followed by a ventricular ectopic.

Diagnosis: Ventricular trigeminy.

QUESTION 32

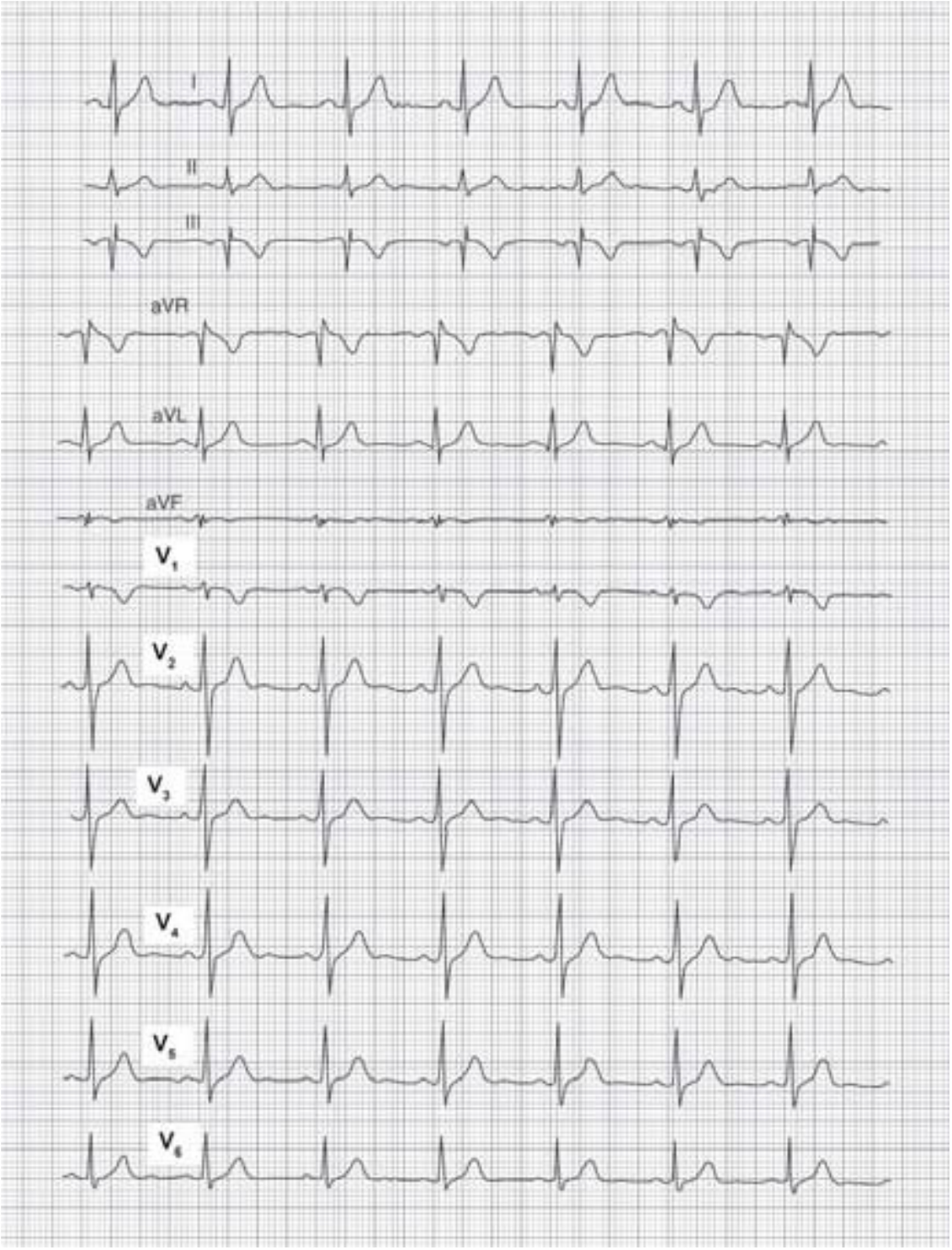


This ECG shows:

- Deep S in lead I and tall R in lead III (indicates right axis deviation).
- Tall P in lead II (P-pulmonale).
- Bifid P in V1 with tall upward deflection.
- Tall R in V1 to V3 with T inversion in V1 to V4.

Diagnosis: Right ventricular hypertrophy with right atrial hypertrophy.

QUESTION 33

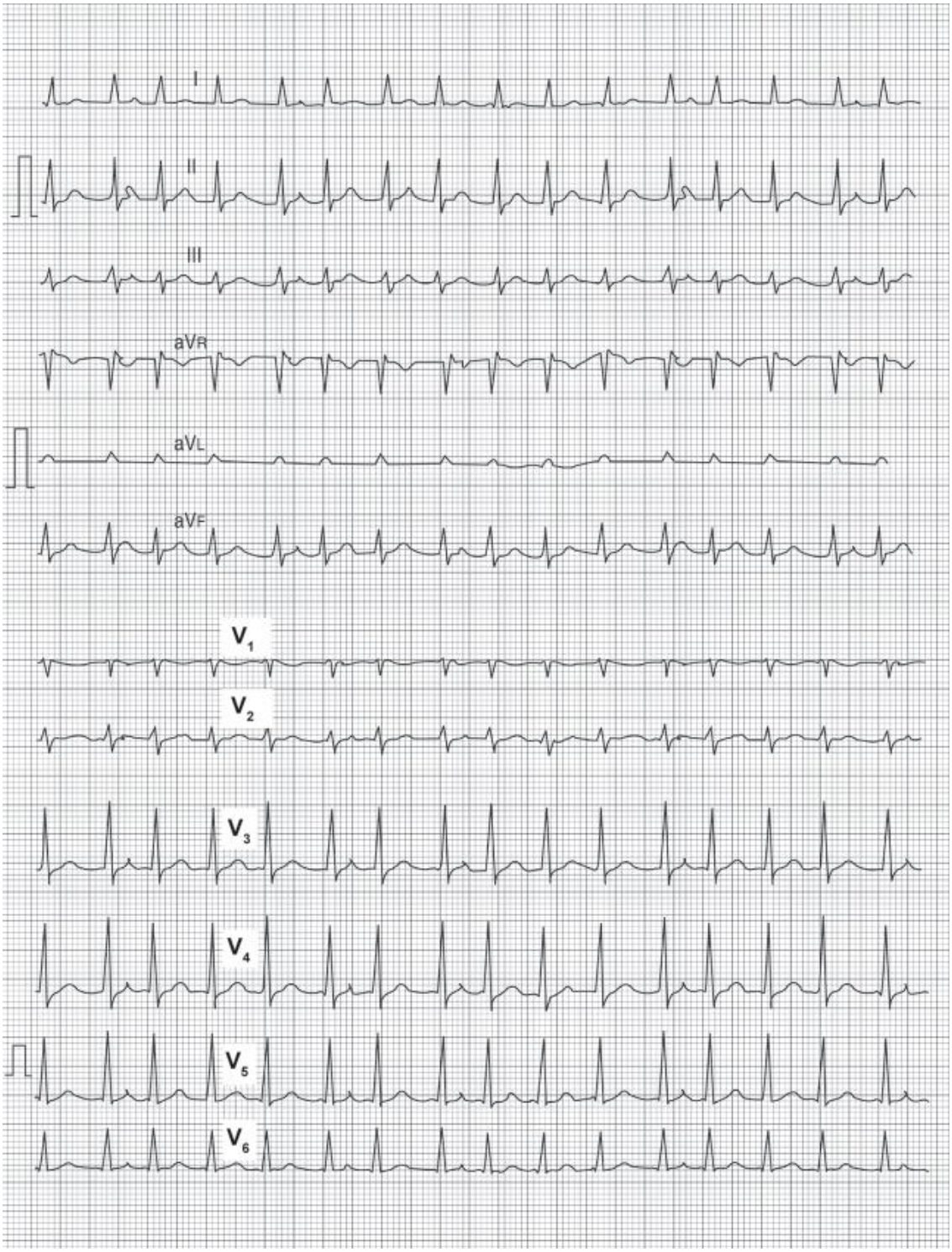


This ECG shows:

- Deep S in lead I.
- Deep Q and T inversion in lead III.

Diagnosis: Pulmonary embolism (typical SIQIIITIII pattern).

QUESTION 34

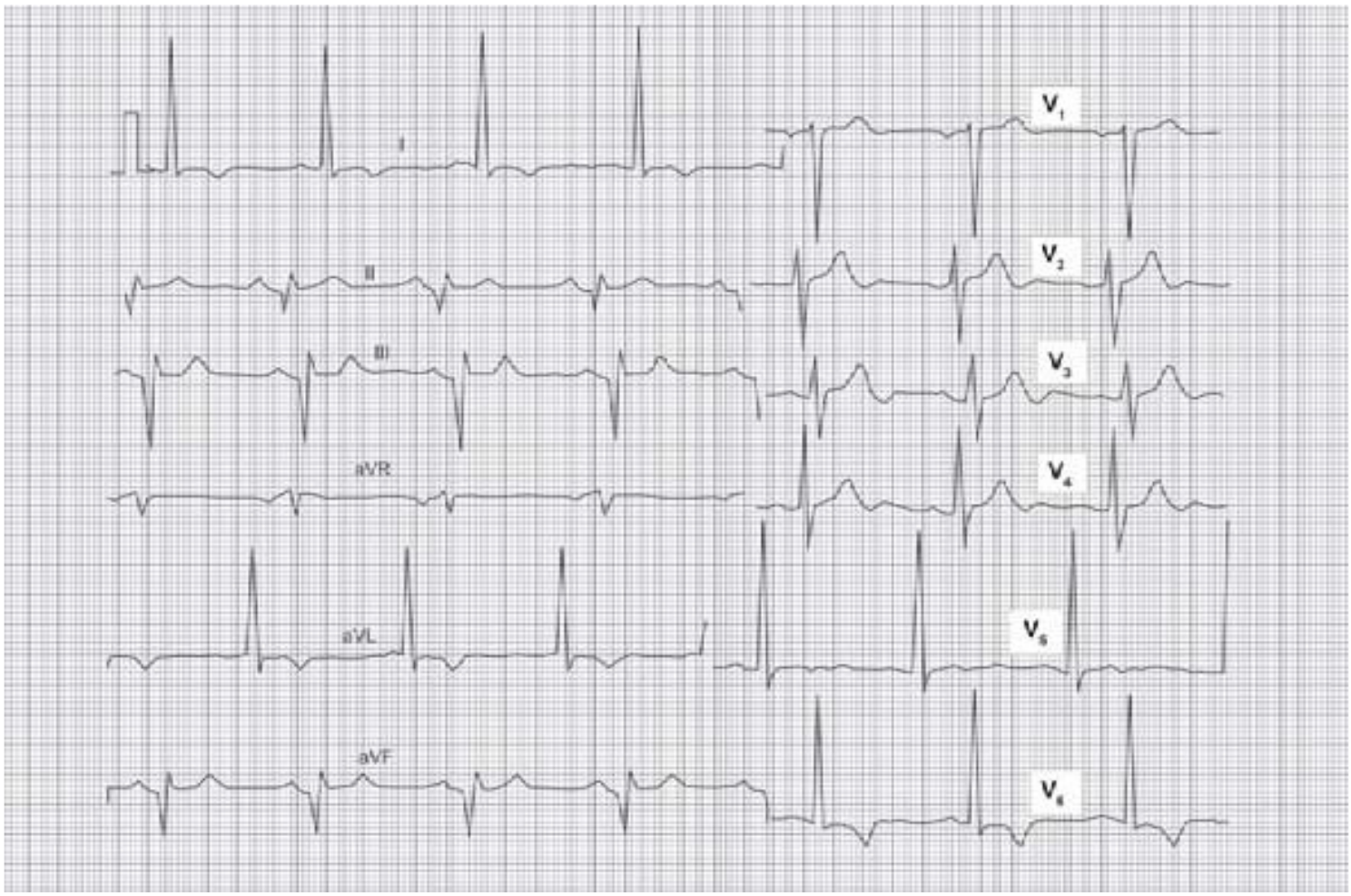


This ECG shows:

- P—absent.
- Rhythm is irregular.
- Heart rate—110/min

Diagnosis: Fast atrial fibrillation.

QUESTION 35

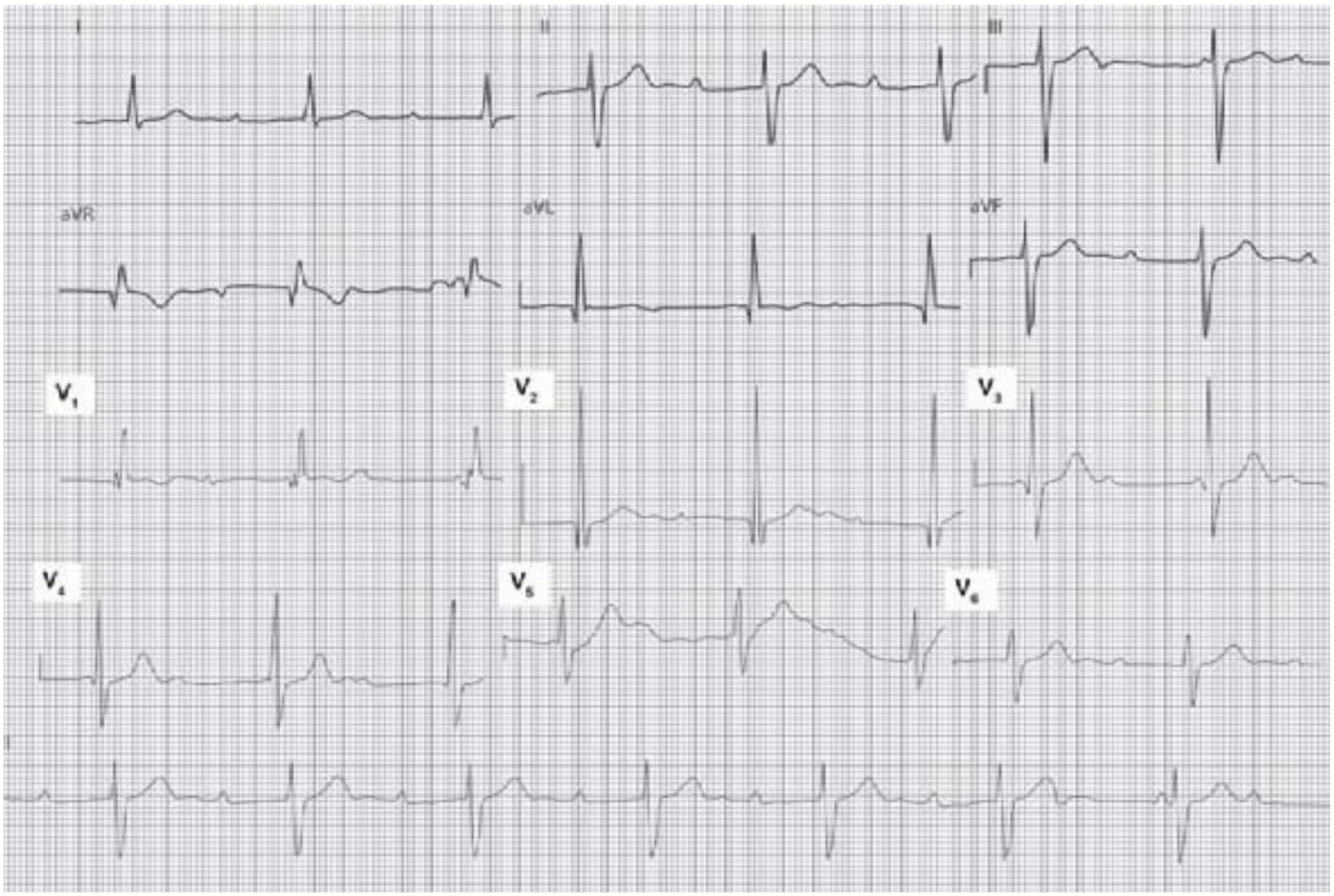


This ECG shows:

- Pathological Q in lead II , III and aVF.
- S V1 + R V6 > 35 mm.
- Tall R in aVL, T inversion in 1, aVL, V6.

Diagnosis: Old inferior myocardial infarction with left ventricular hypertrophy with strain.

QUESTION 36

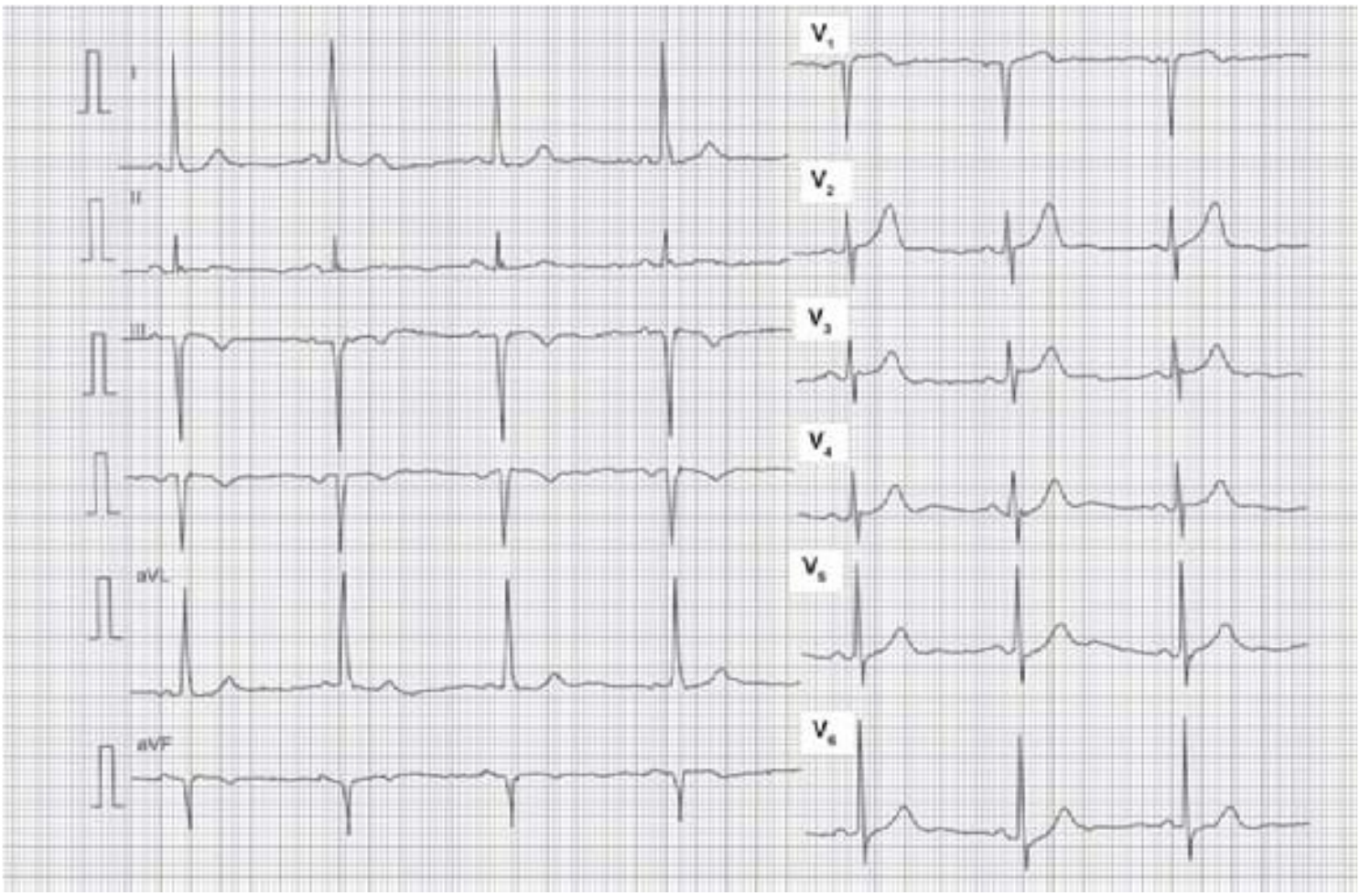


This ECG shows:

- Atrial rate—100/min.
- Ventricular rate —50/m.
- Complete dissociation between P and QRS.

Diagnosis: Complete heart block.

QUESTION 37

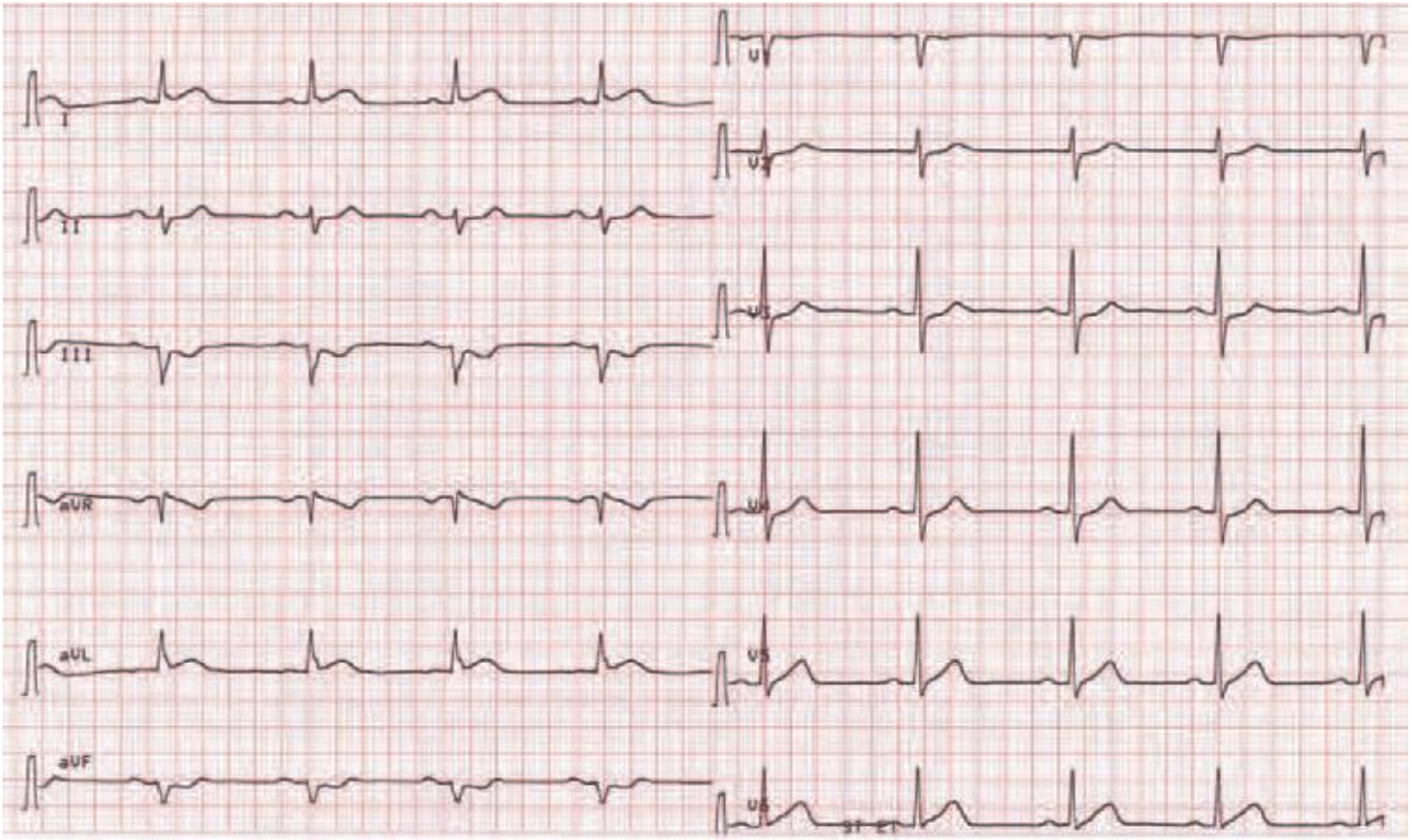


This ECG shows:

- Pathological Q in lead III and aVF.
- Heart rate—50/min.
- P, QRS, T—normal.

Diagnosis: Sinus bradycardia with old inferior myocardial infarction.

QUESTION 38

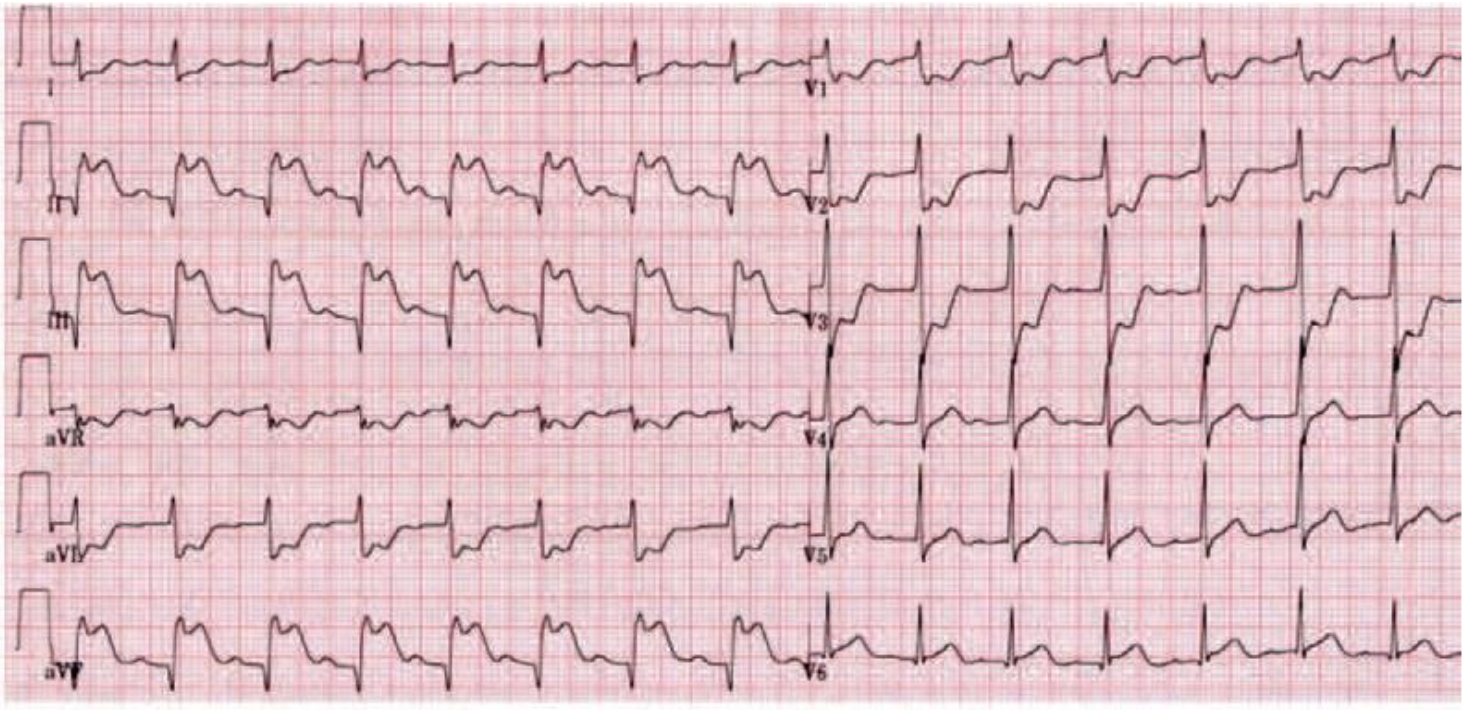


This ECG shows:

- Sinus bradycardia.
- Acute lateral MI with slight ST elevation in leads I and aVL due to a proximal occlusion of a left circumflex coronary artery

Diagnosis: Sinus bradycardia Lateral myocardial infarction.

QUESTION 39

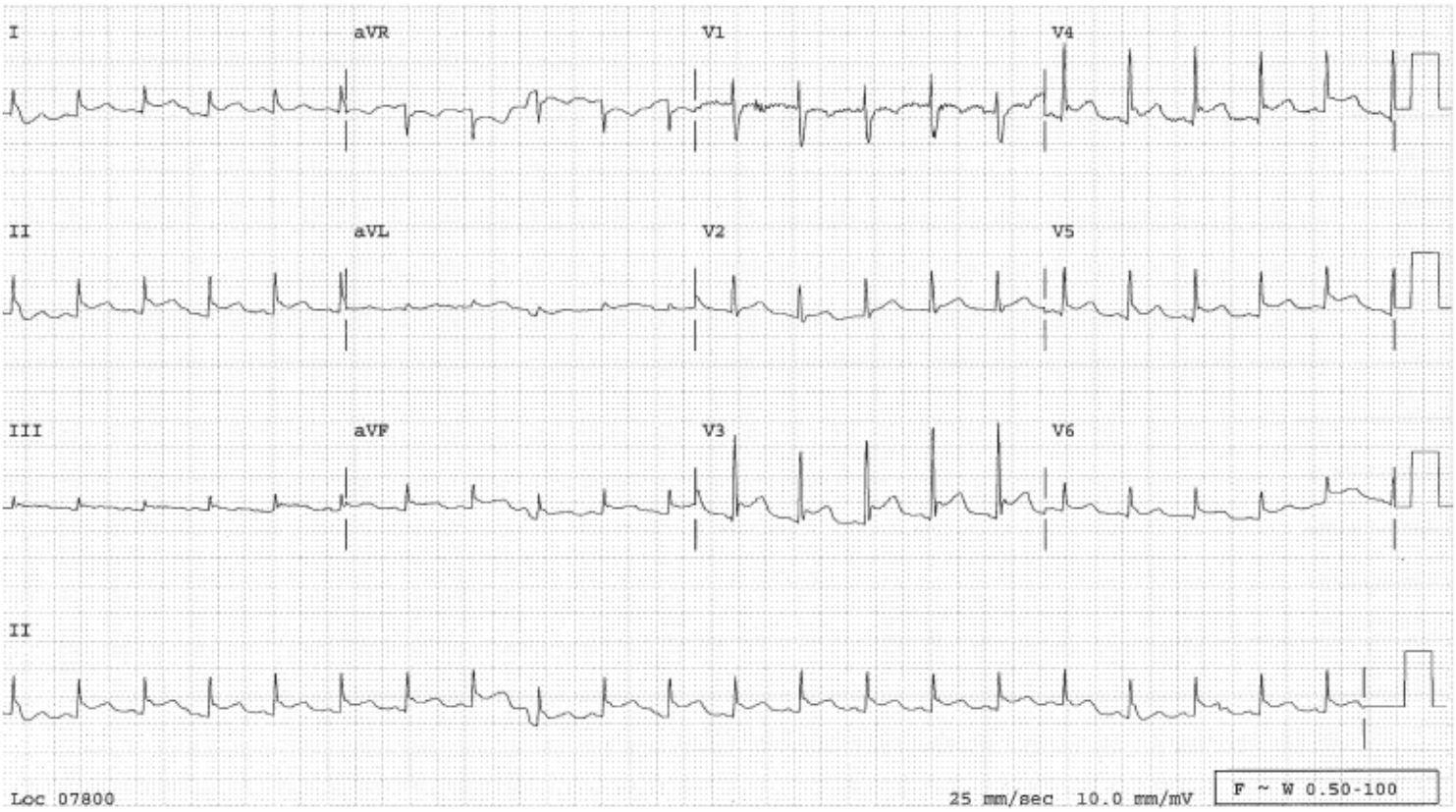


This ECG shows:

- Sinus tachycardia at 100 bpm,
- acute inferior MI with ST elevation in II, III, and aVF and ST III > II consistent with occlusion of the right coronary artery.

Diagnosis: Inferior myocardial infarction.

QUESTION 40

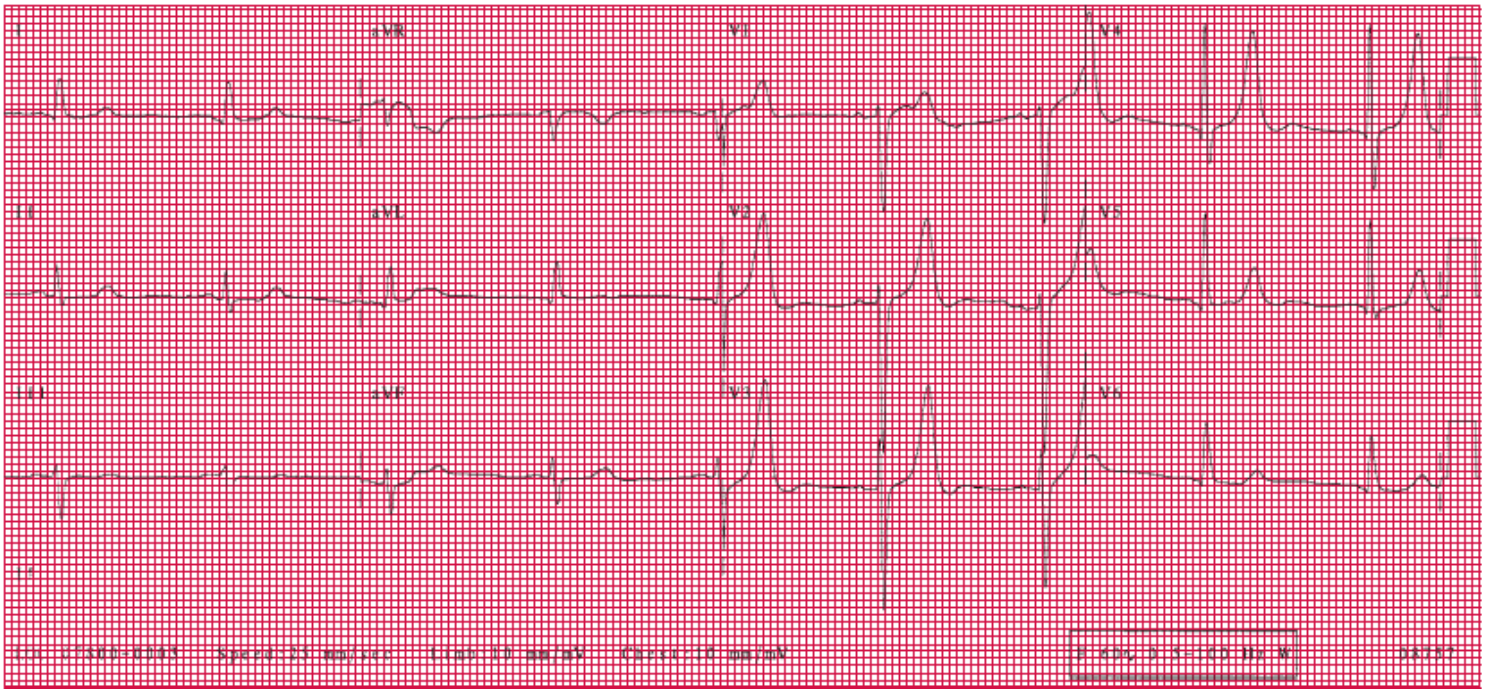


This ECG shows:

- sinus tachycardia 126/min;
- typical features: widespread ST elevation and PR segment elevation in aVR, which shows ST segment depression.

Diagnosis: Acute pericarditis

QUESTION 41

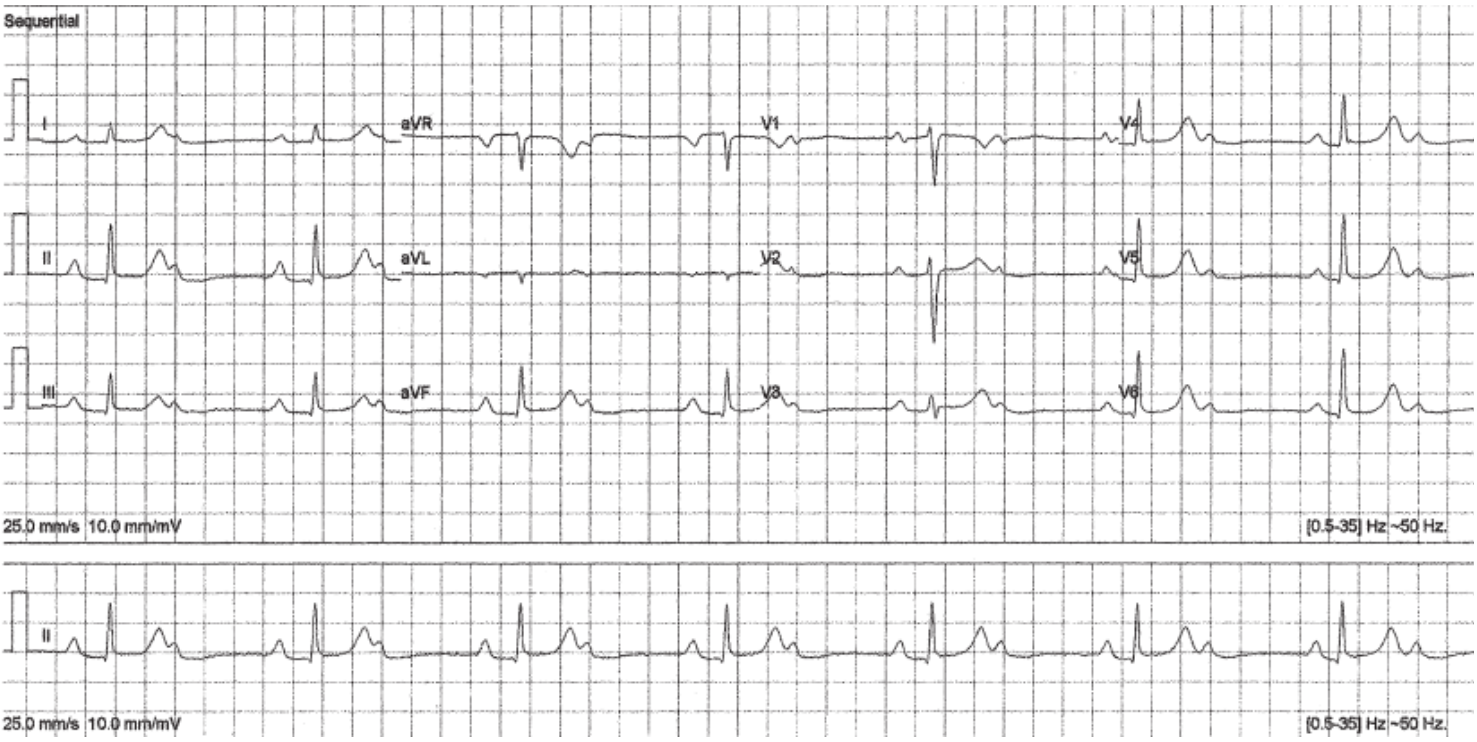


This ECG shows:

- Tall tented T waves in V2–V4;
- serum potassium 5.9 mmol/L.

Diagnosis: Hyperkalemia

QUESTION 41

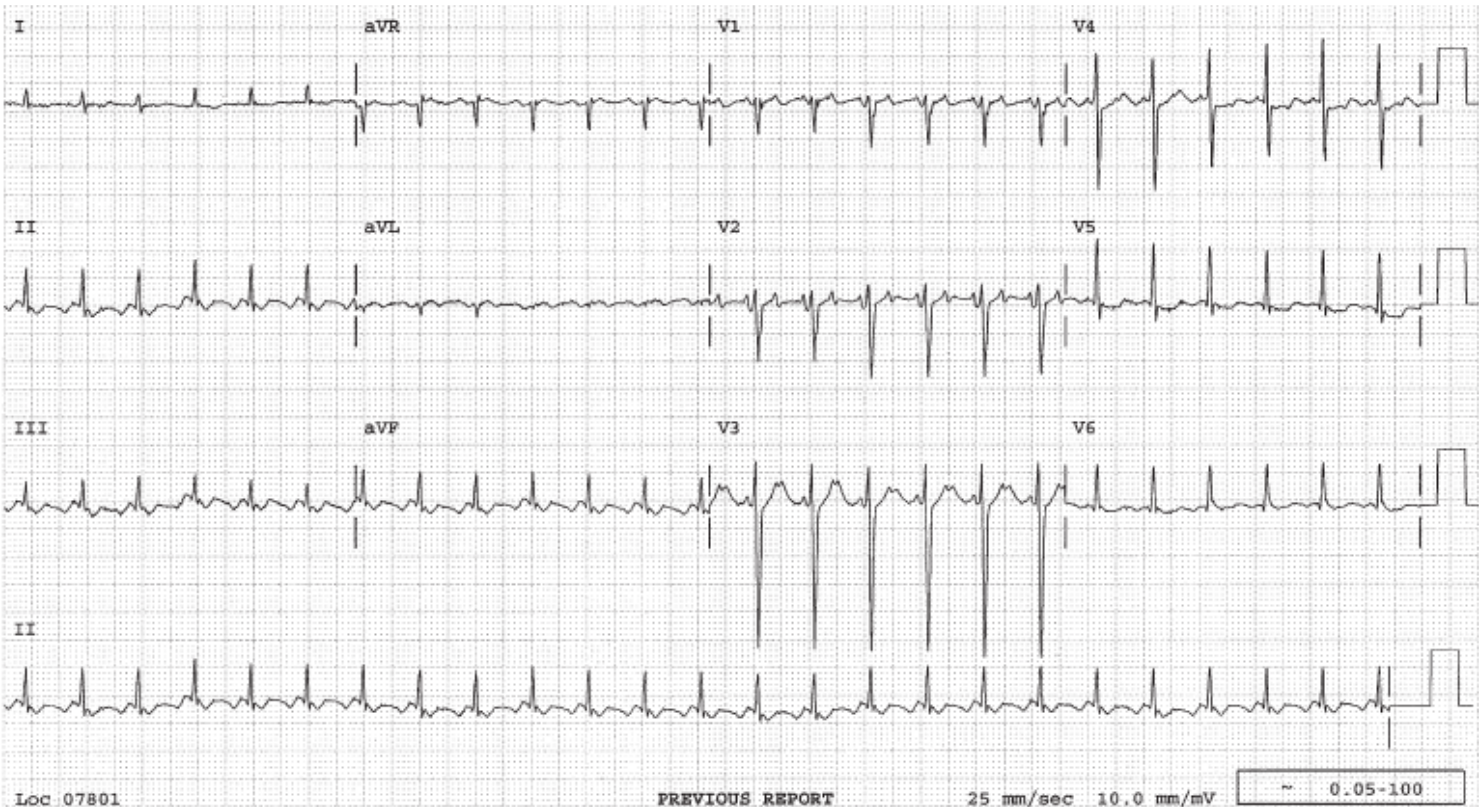


This ECG shows:

- normal narrow QRS; approximately 30% of Mobitz II exhibits a narrow QRS complex.

Diagnosis: A 2:1 AV block, probably Mobitz type I

QUESTION 42

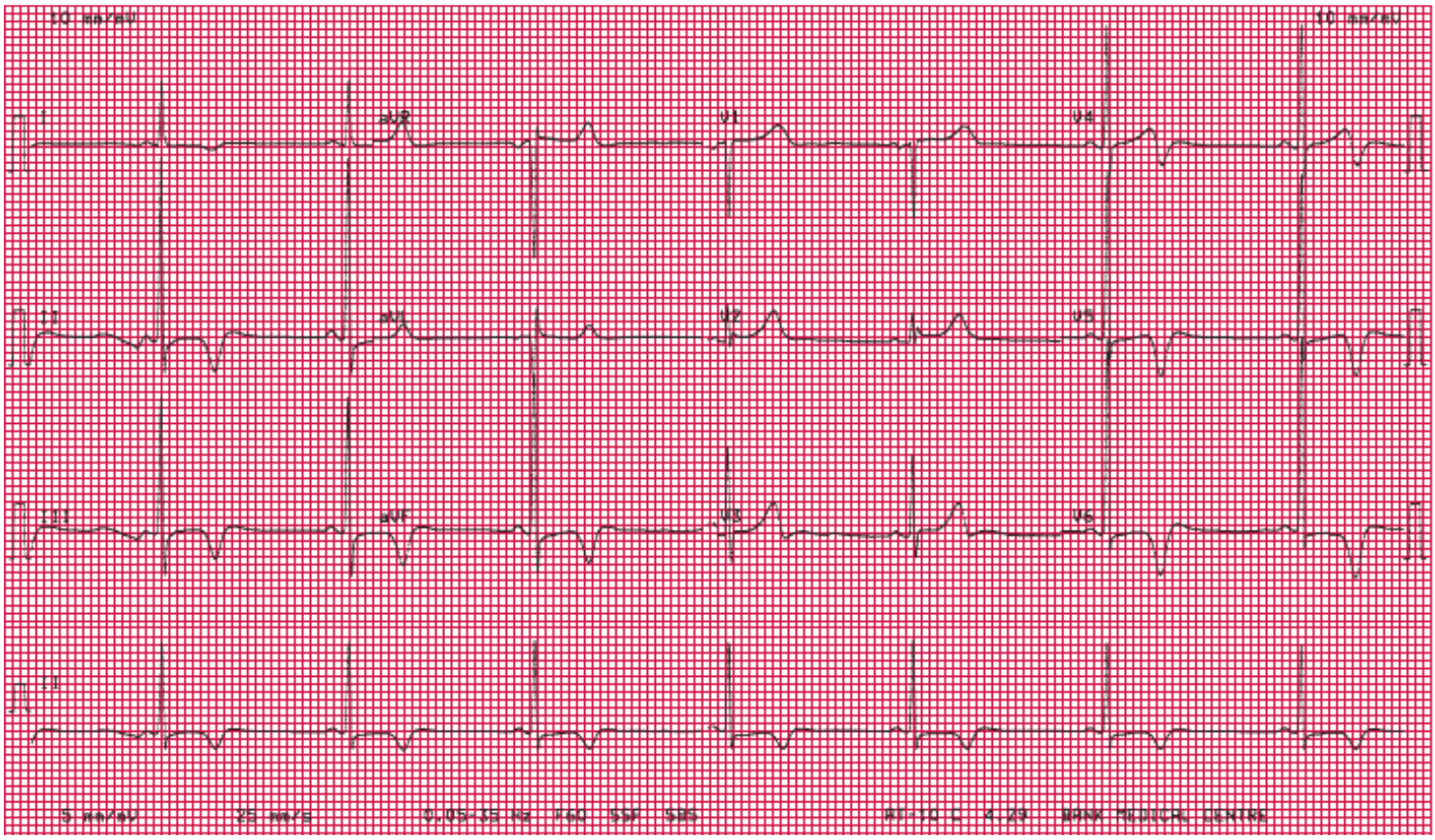


This ECG shows:

- a ventricular rate of 150/min with 2:1 AV conduction;
- the prominent sawtooth pattern in II, III, aVF is typically absent in I, V5, V6.

Diagnosis: Atrial flutter

QUESTION 43

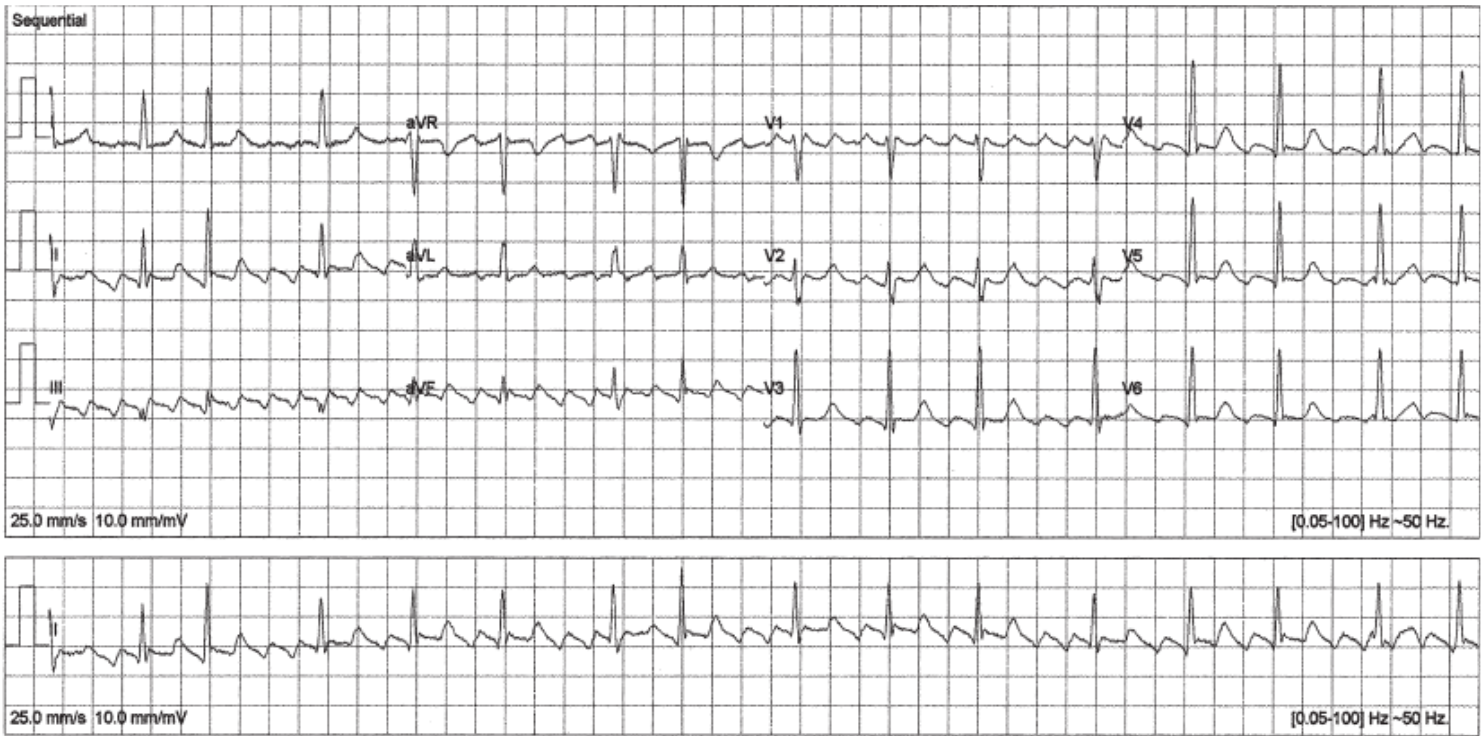


This ECG shows:

- Sinus bradycardia 44/min.

Diagnosis: . Sinus bradycardia

QUESTION 44

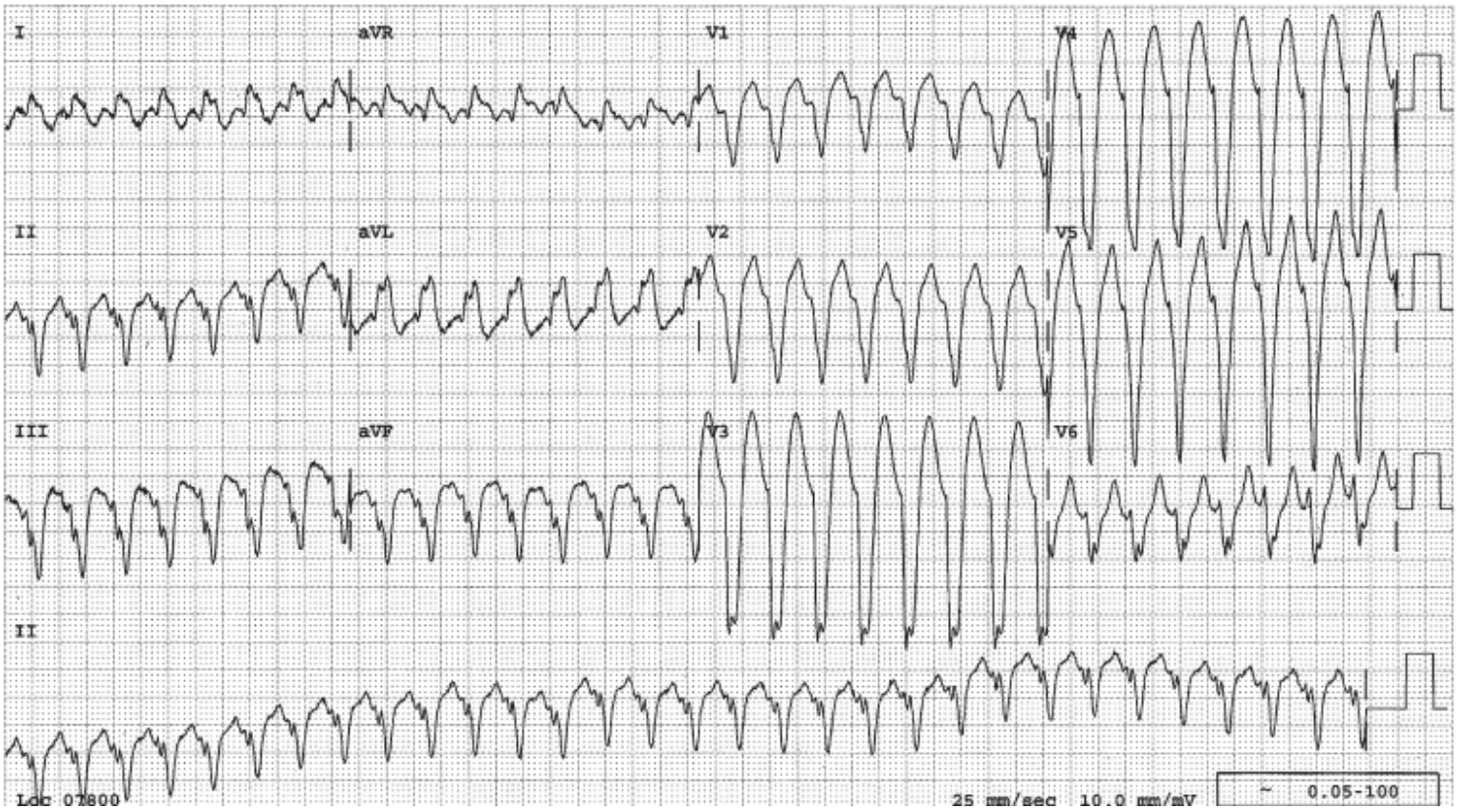


This ECG shows:

- prominent sawtooth pattern.

Diagnosis: Atrial flutter

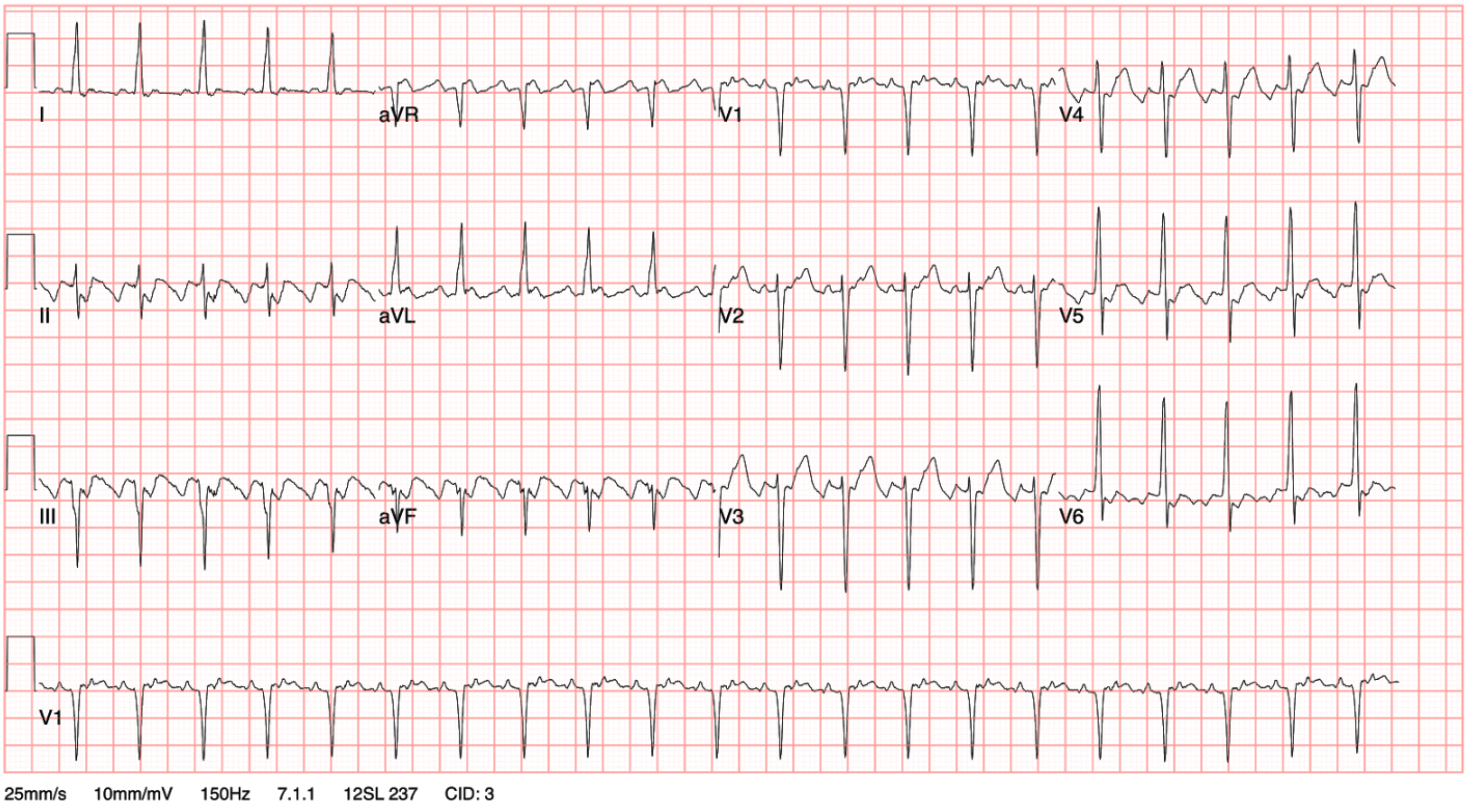
QUESTION 45



This ECG shows:

Diagnosis: Ventricular tachycardia

QUESTION 46

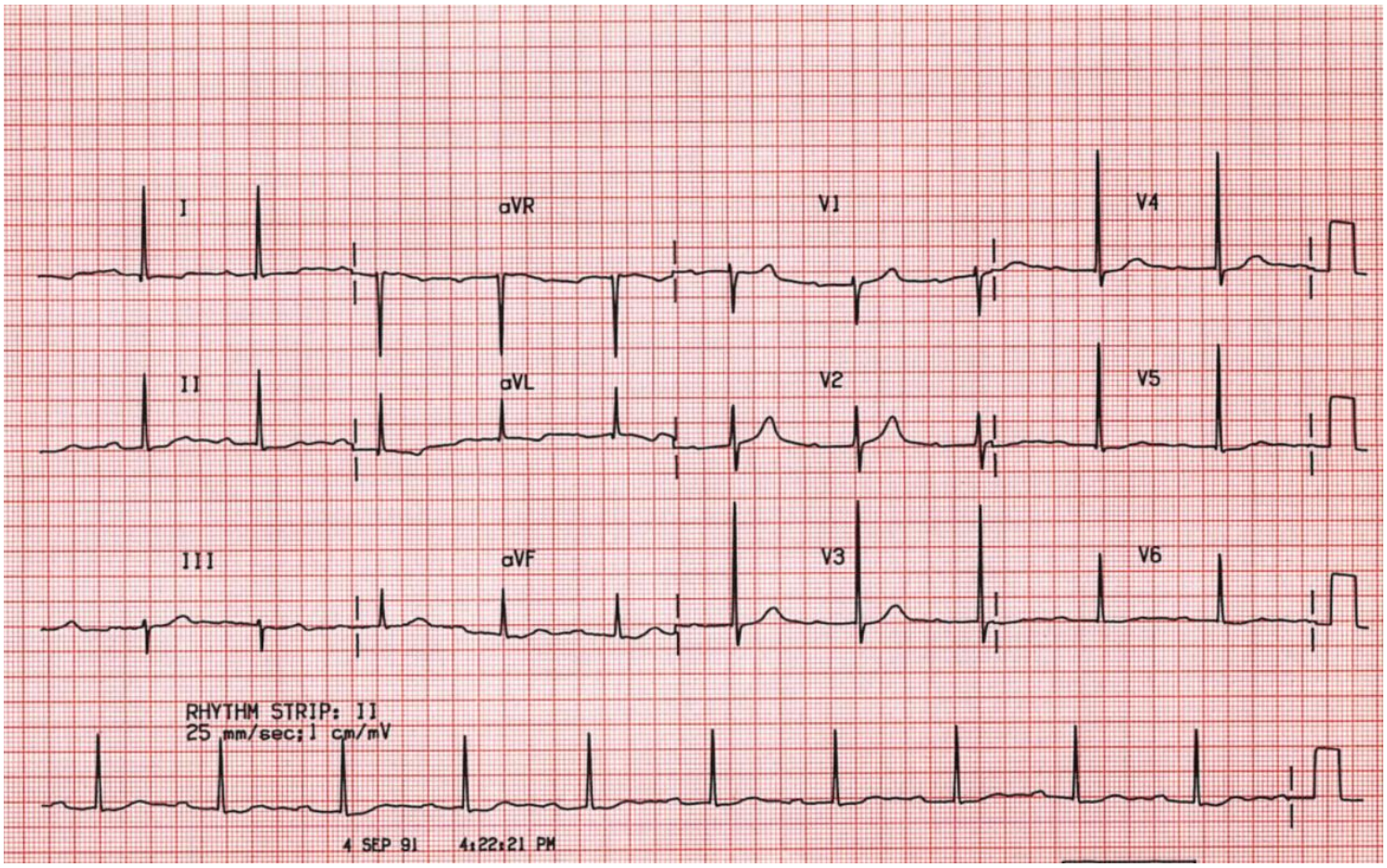


This ECG shows:

- Regular Narrow-Complex Tachycardia with HR roughly 150
- P waves that march out at a rate of roughly 300
- prominent sawtooth pattern.

Diagnosis: Atrial flutter

QUESTION 47



This ECG shows:

- Sinus rhythm is present. A QRS complex follows each P wave.
- PR interval is prolonged – to .32 second.

Diagnosis: First-degree AV block