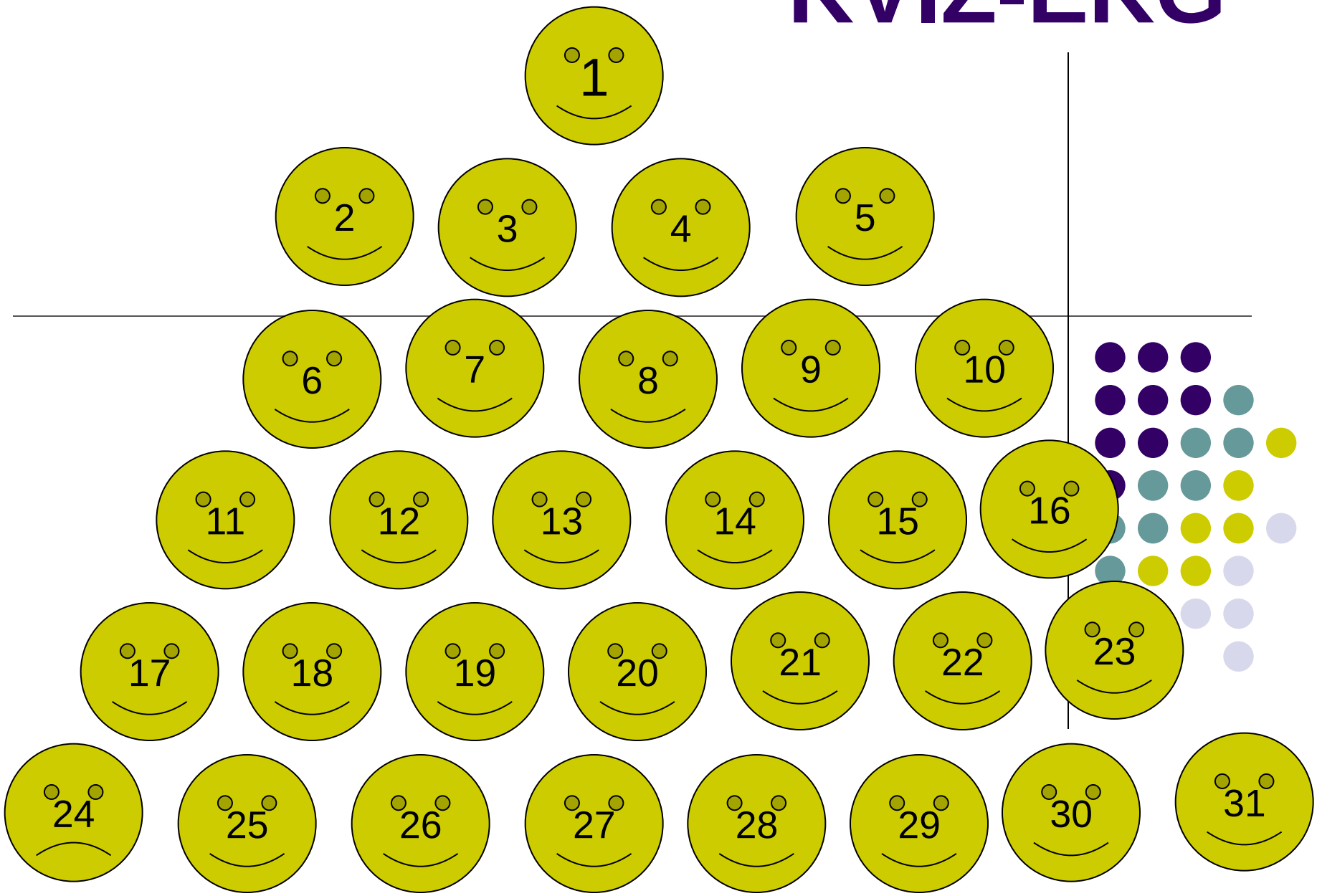
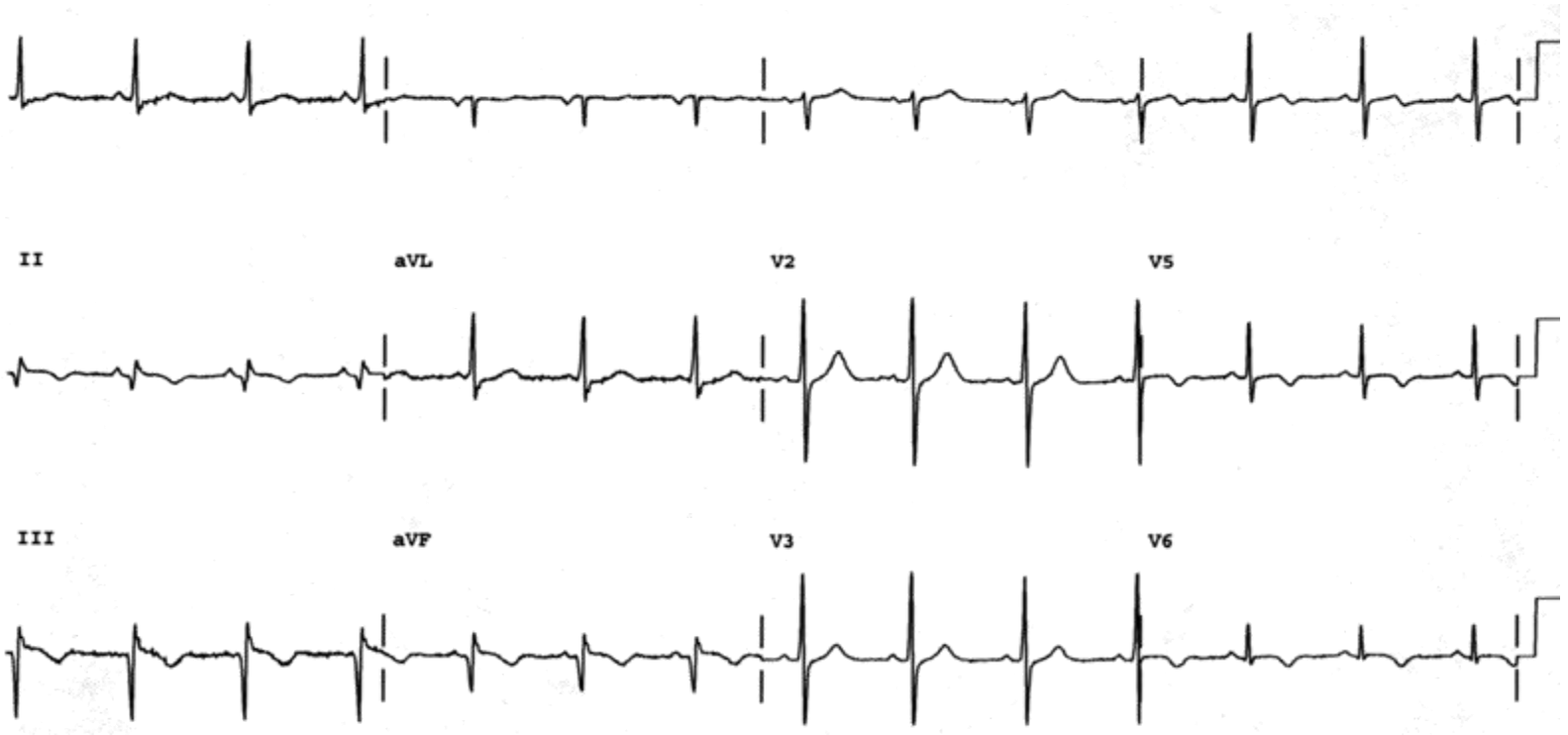
KVIZ-EKG


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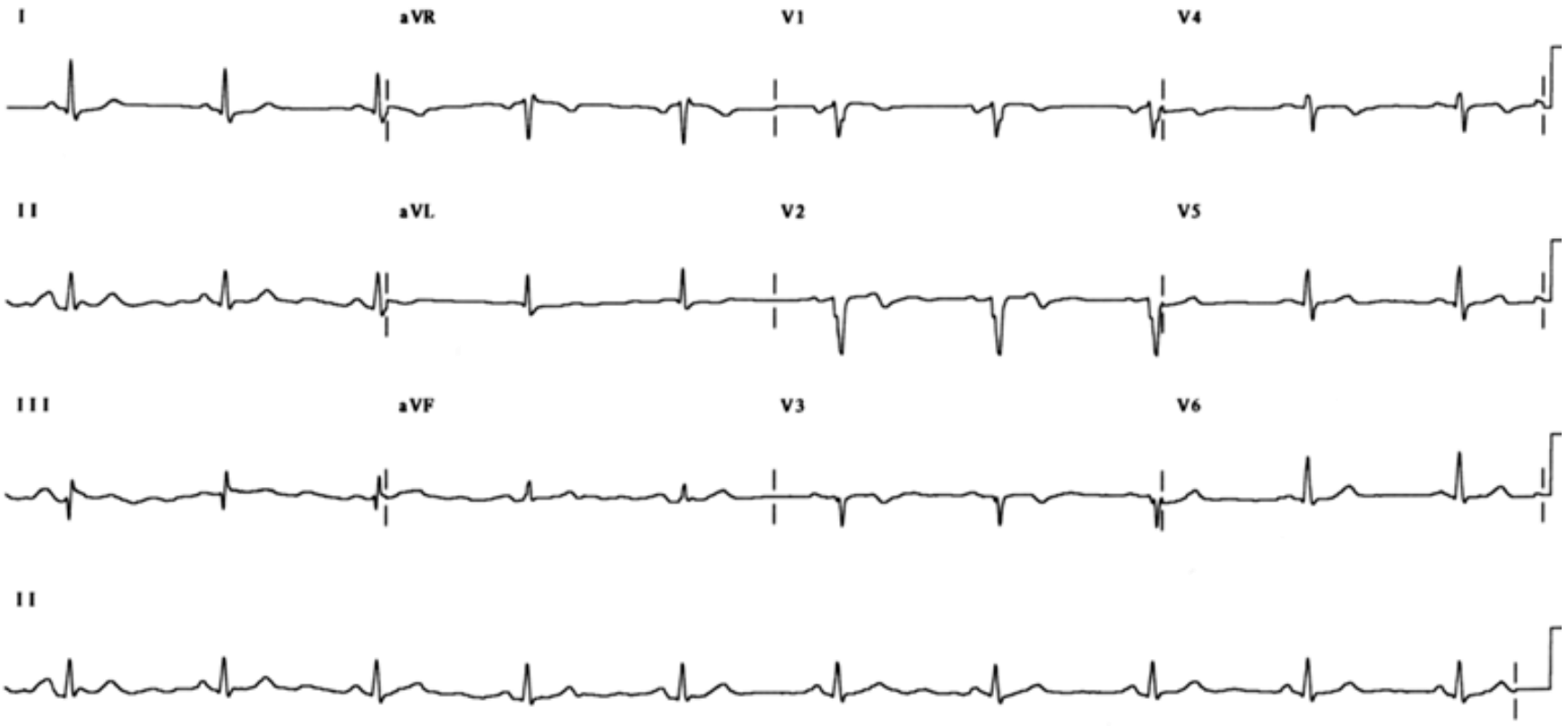
EKG1



Interpretacija 1

- EKG 1:The rhythm is sinus rhythm with a rate of 80/minute. The PR interval is 130 ms. The Q waves in II, III, aVF are diagnostic of an inferior wall myocardial infarction.. The ST segment elevation and inverted T waves in II, III, aVF suggest that this inferior infarction is recent. The inverted T waves in V5 and V6 suggest possible true posterior wall ischemia/infarction which could be an associated with the inferior infarction

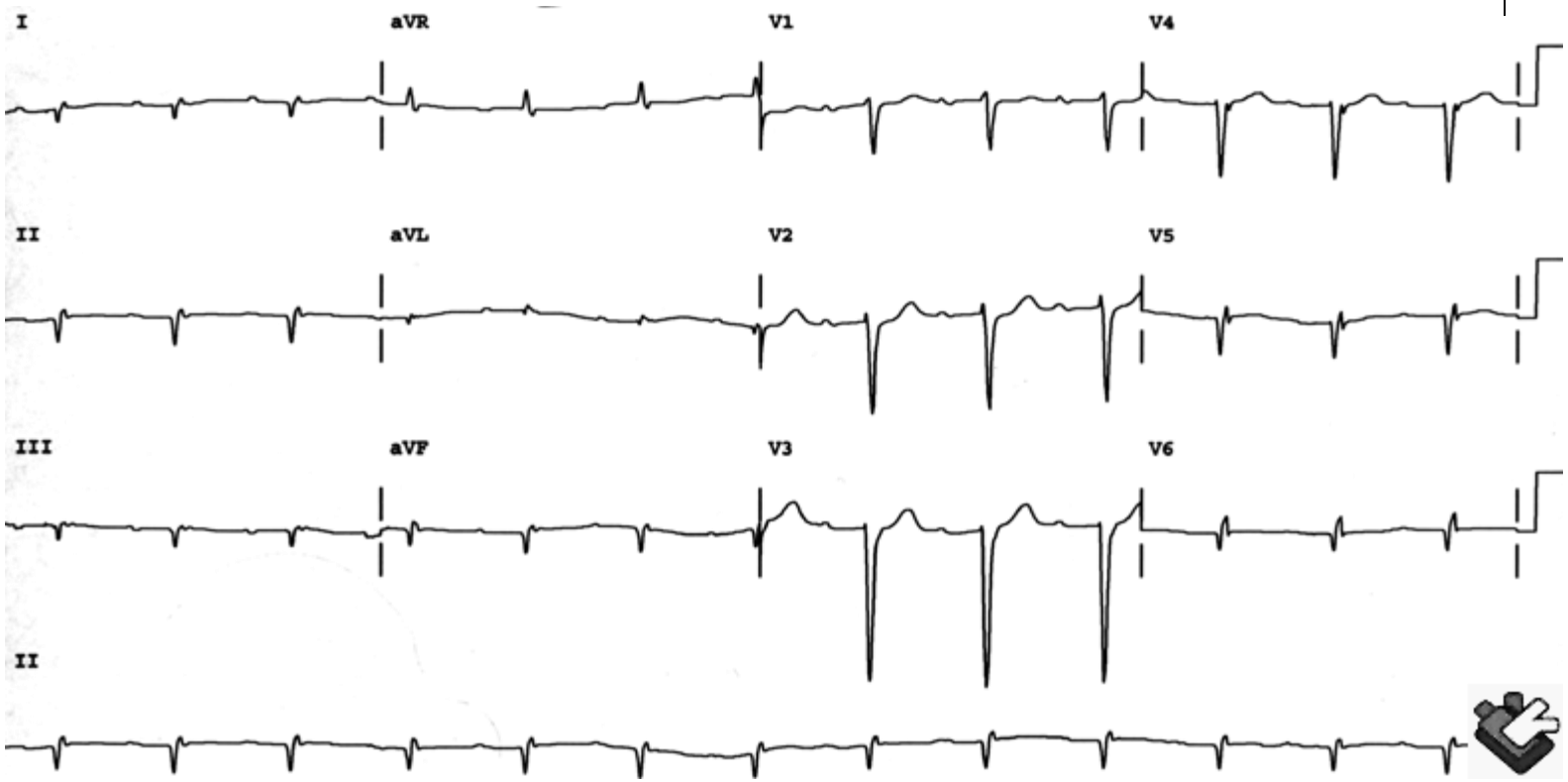
EKG2



Interpretacija2

- EKG2: The rhythm is sinus rhythm at 60 beats per minute. Left atrial enlargement may be indicated by the negative P waves in lead V1. Anterior infarction is strongly suggested by the lack of an R wave and a QS wave seen in precordial lead V3. Normally, there should be no Q waves present in leads V2 or V3.

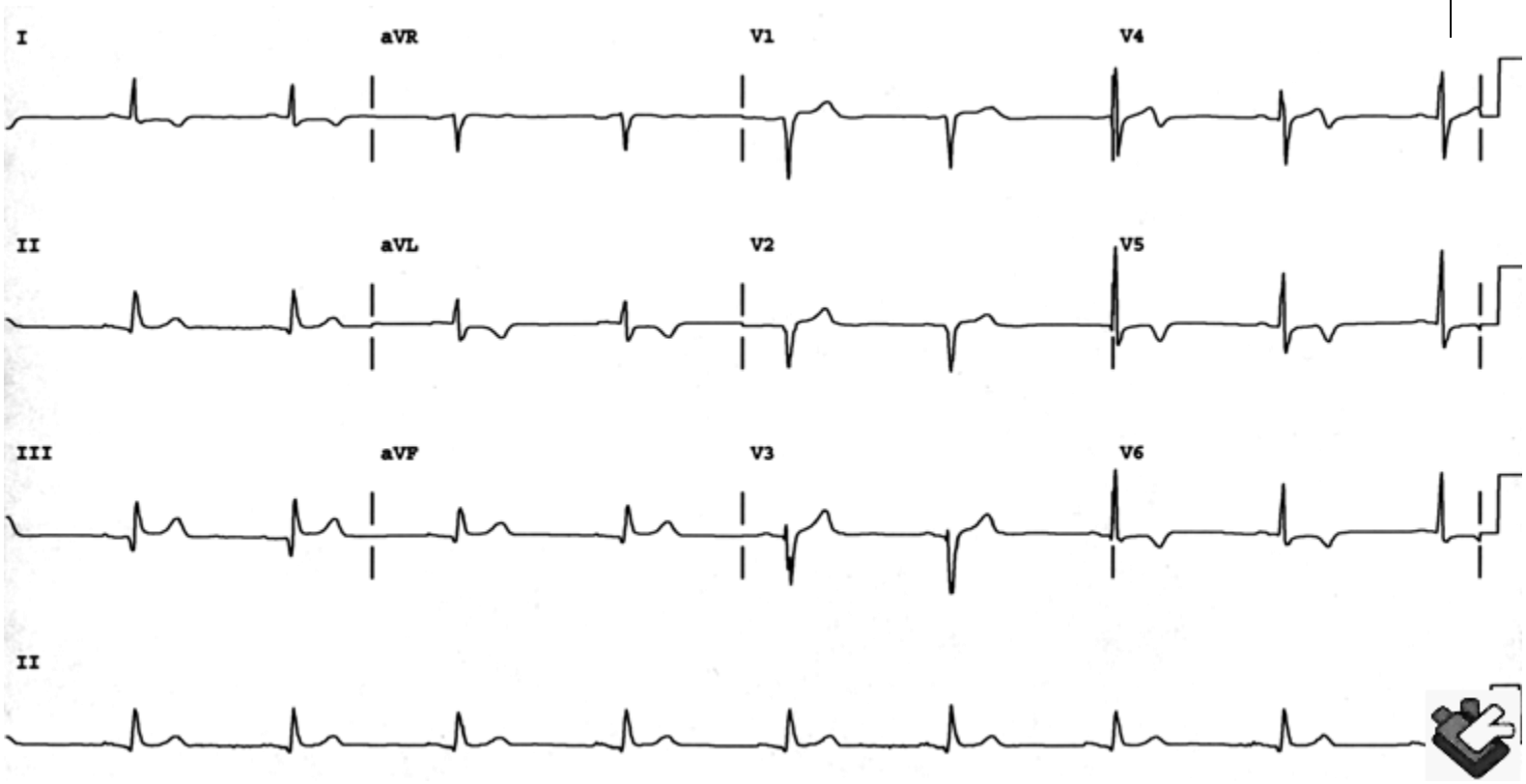
EKG3



EKG3

- EKG 3: The rhythm is sinus rhythm with a rate of about 75/minute. There is first degree atrioventricular block demonstrated by a PR interval of 300 milliseconds.
  An inferolateral infarction is indicated by the Q waves in leads II, III, aVF (inferior) and there are Q waves as well as I, aVL, V5 and V6 . The poor R wave progression in the precordial leads and the marked posterior rotation of the QRS axis suggests an anterior infarction as well.

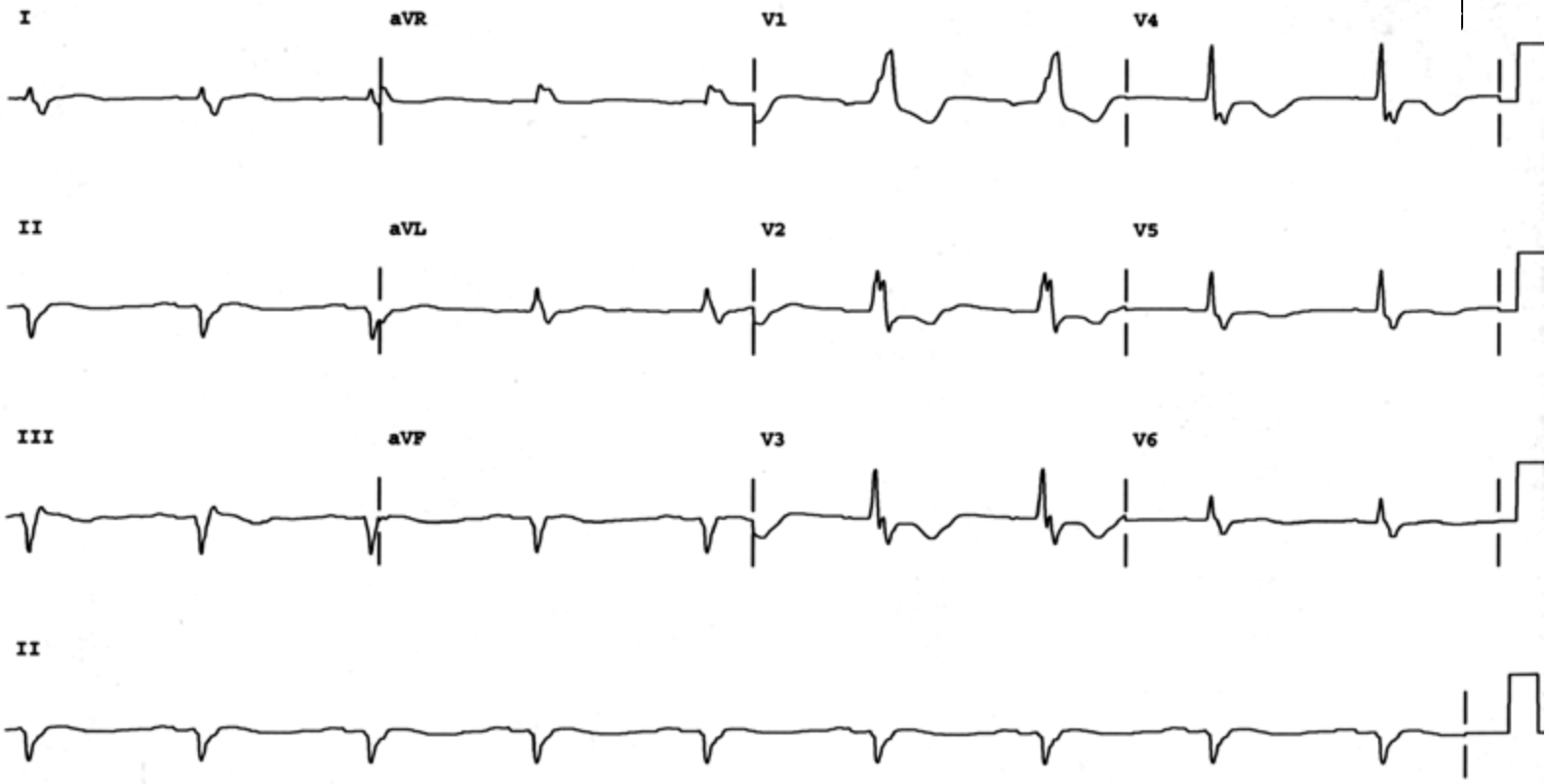
EKG4



Interpretacija4

- EKG 4: The rhythm is sinus rhythm with at 50/minute. The PR interval is 180 ms. The QRS axis is normal
  Q waves are seen in lead II, III and aVF as well as V2 – V4. There is ST-segment elevation in the inferior leads and precordial leads V1-V4. This suggests an anterior myocardial infarction of undetermined age and a possibly inferior infarction (the q wave in AVF is boarder-line). The T waves are also inverted in the lateral leads.

EKG5

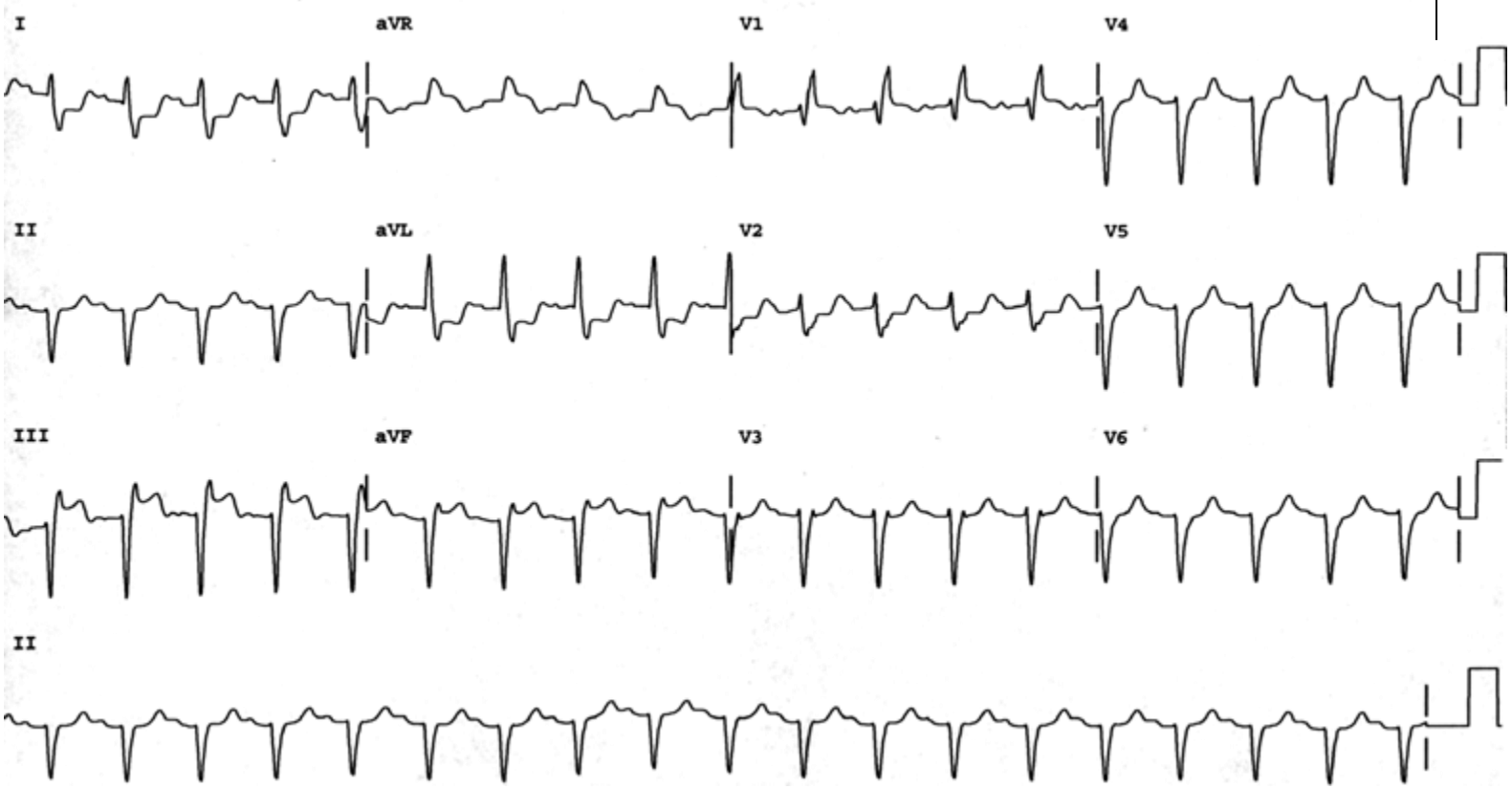


Interpretacija5

- EKG5: The rhythm is sinus rhythm at 50/minute. The PR interval is 280ms. The QRS interval duration is about 200 milliseconds. There is an M shaped QRS complex in leads V1 to V4. In addition there are deep and slurred S waves in leads I, aVL, V5 and V6. There are also prominent S waves proceeded by very small r waves in II, III and aVF as well as a left axis deviation of first part of the QRS. Together, these phenomena indicate the presence of a trifasicular block, first degree block, right bundle branch and left anterior hemiblock..

  The ST-segment depression in leads V1-V4 and inverted T waves which are probably related to the conduction disturbance. The tiny R waves in II, III and aVF and the dominant R in V1 could also suggest an old inferior/true posterior myocardial infarction.

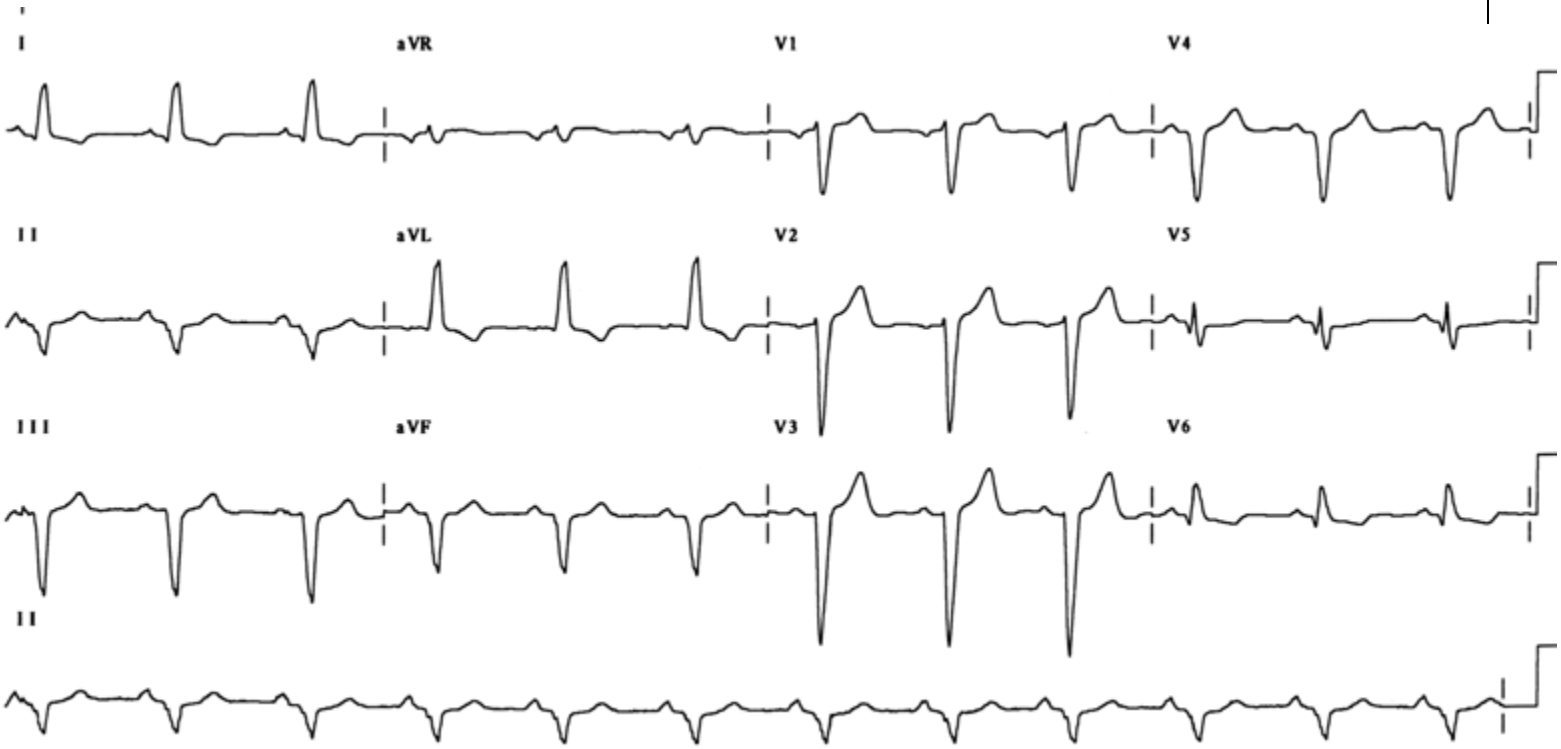
EKG6



Interpretacija6

- EKG6: The rhythm is sinus tachycardia at approximately 120/minute. The P waves are biphasic in V1. The PR interval is 140 ms. There is an M shaped QRS complex (rSR' variant) in leads V1 to V3. In addition there are deep and slurred S waves in leads I, aVL, V5 and V6. There are also prominent S waves proceeded by small r waves in II, III and aVF as well as left axis deviation of the first part of the QRS. Together, these phenomena indicate the presence of a bifascicular block: right bundle branch block and left anterior hemiblock.. The ST elevation seen in leads II, III and aVF and ST depression in leads I and aVL suggest acute inferior injury/infarction. There is also slight ST elevation in V1. The ST elevation in V1 suggests acute anterior ischemia/injury/infarction.

EKG7

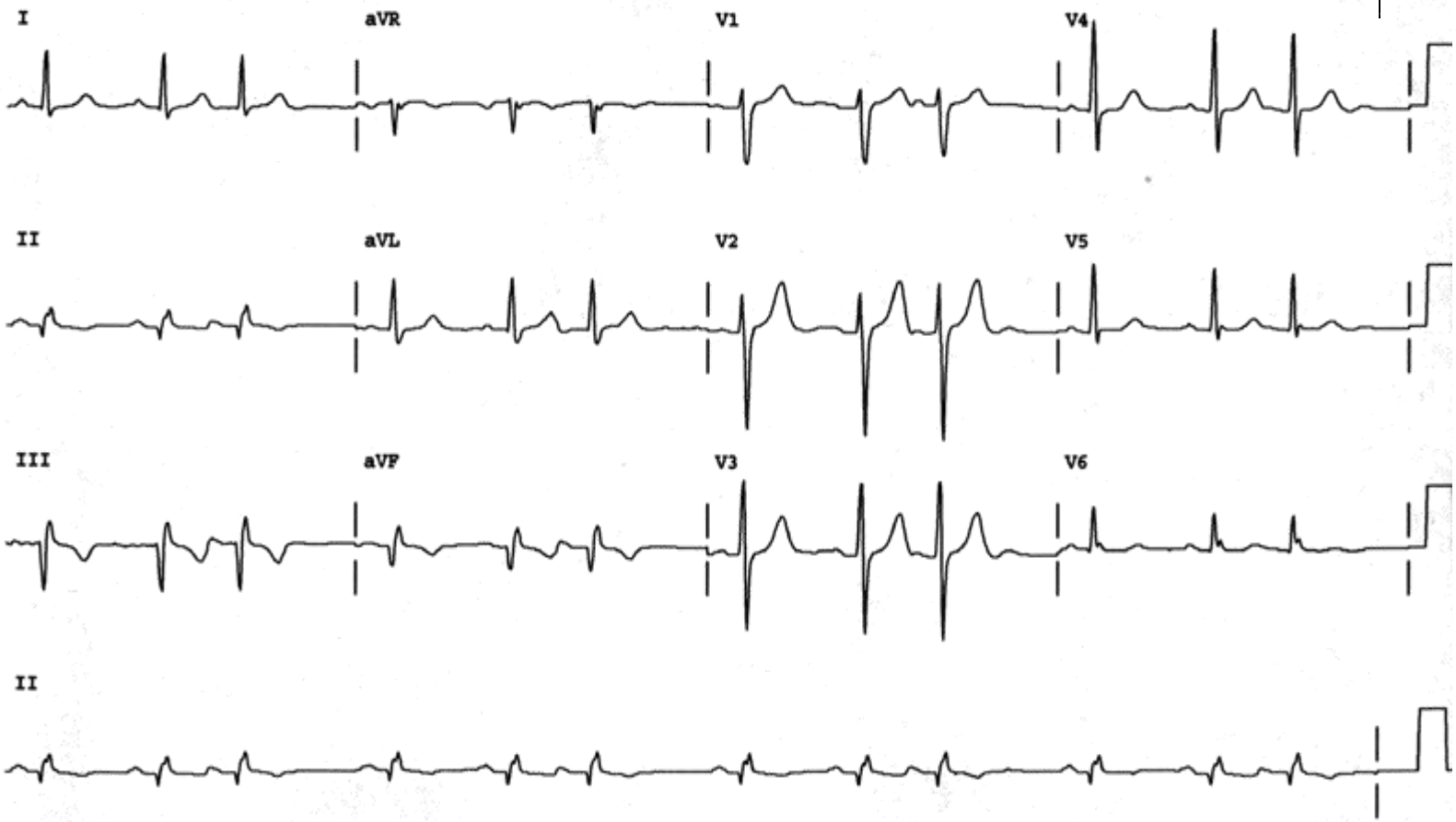


Interpretacija7

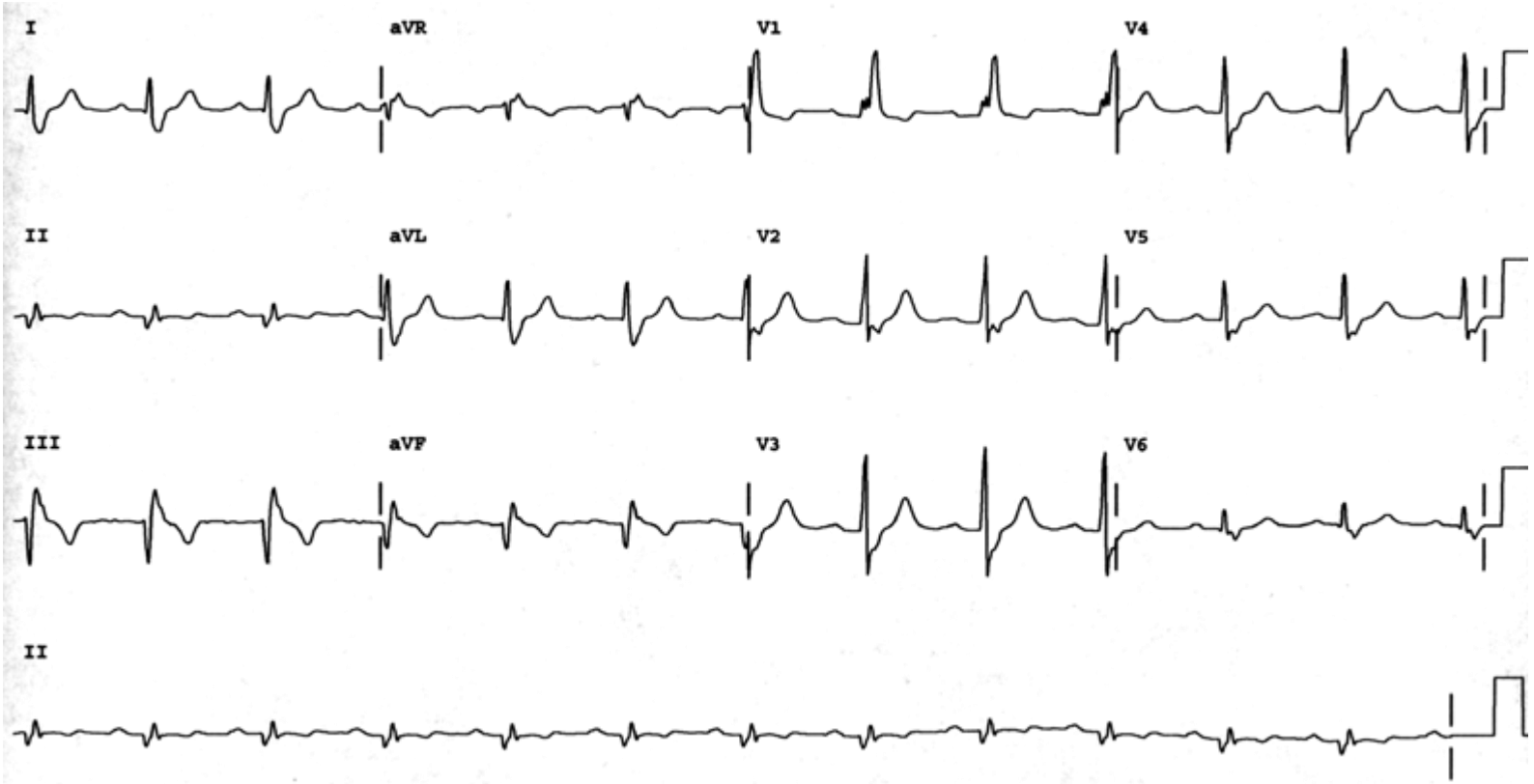
- EKG7: The rhythm is sinus rhythm at approximately 70/min. The deep S waves in the inferior leads and a left axis deviation indicates left anterior hemiblock.

  There is poor R wave progression in the anterior precordial leads with a QS complex in V4. There is ST segment elevation in leads V1 to V4. There are very small or R waves leads II, III and aVF. All of these phenomena point towards the presence of an anterior wall and possible inferior wall infarction.

EKG8-1



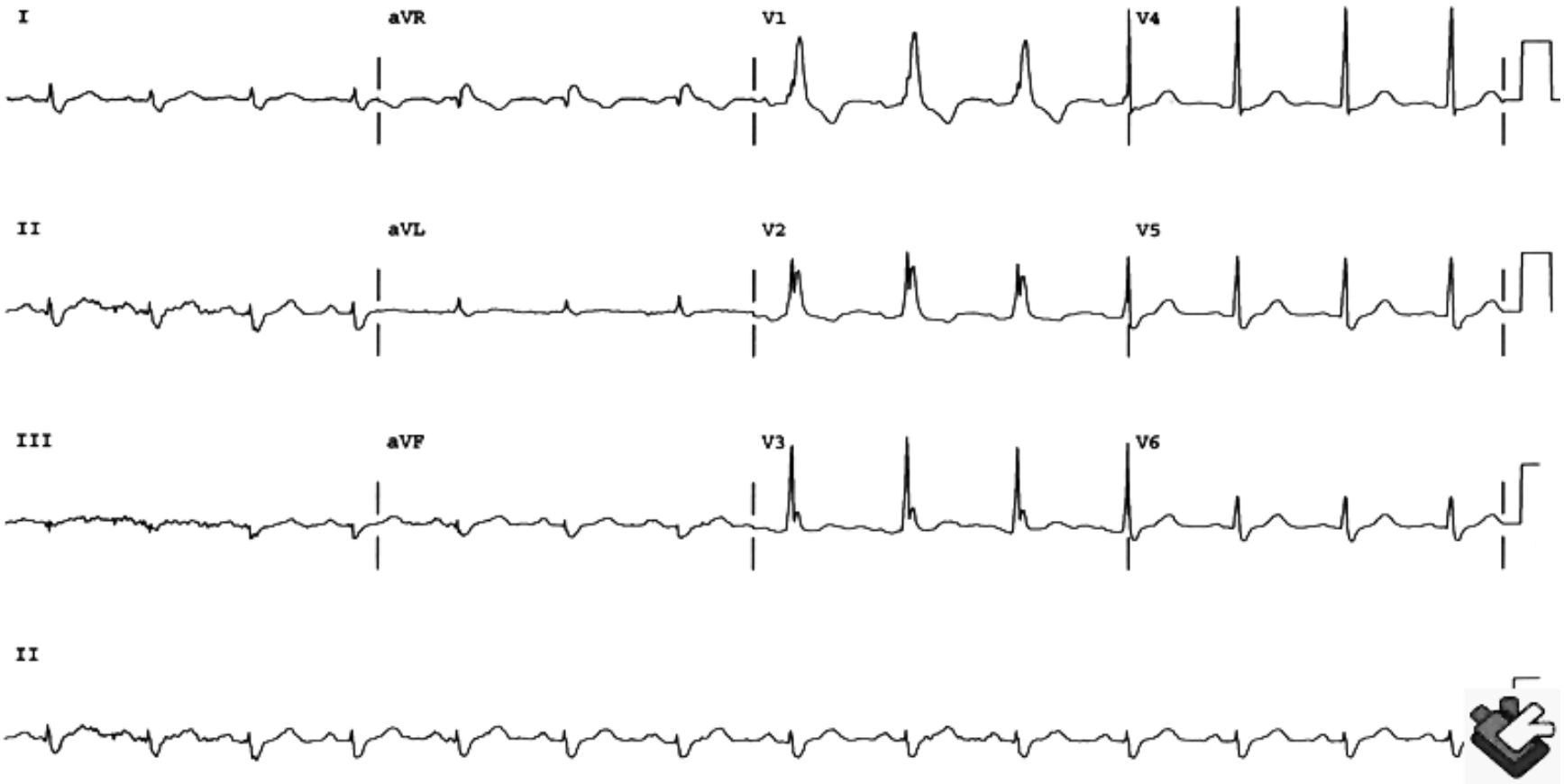
EKG8-2



Interpretacija8

- This tracing shows sinus rhythm at 70/minute and supraventricular trigeminy (ie., every third beat is premature). The mean ventricular rate is about 80. There are Q waves in leads II, III and aVF indicating the presence of an inferior infarction. There is no significant ST deviation so the infarction is probably old.

EKG9



Interpretacija9

- EKG9: This tracing shows sinus rhythm at 82/minute. The PR interval is 180 ms. The QRS interval duration of 260 ms indicates a conduction defect. There is an M shaped QRS complex (rSR' variant) in leads V1 to V3. In addition there are S waves in leads I, aVL, V5 and V6. There are also prominent S waves proceeded and small r waves in II, III and aVF . The QRS has as a left axis deviation. These findings indicate the presence of a bifascicular block, right bundle branch and left anterior hemiblock..

  The inverted T waves in V1 and V2 are probably due to the conduction disturbance and not ischemia.

EKG10

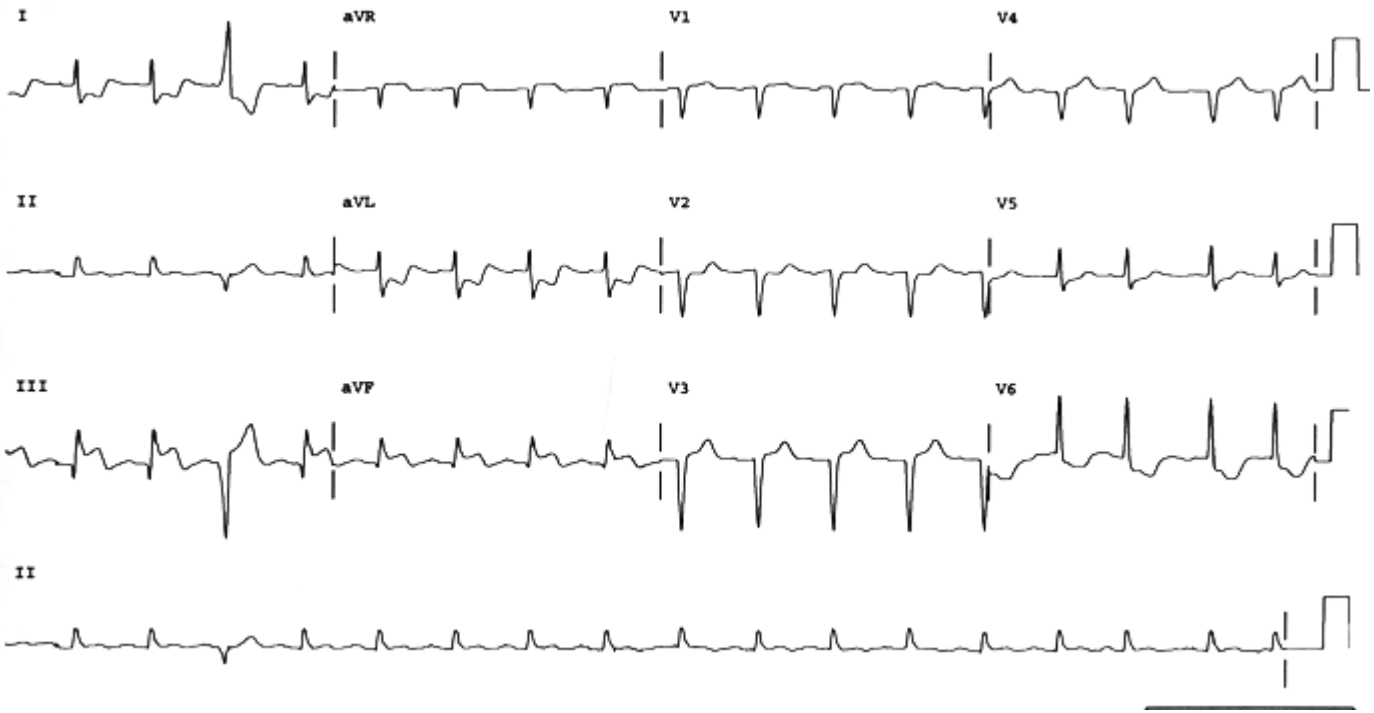


Interpretacija10

- This tracing shows sinus tachycardia at 112/minute. The PR interval is 140 ms. Right atrial enlargement is suggested by the tall P waves in lead II and left artrial abnormality by the negative P wave deflection in V1. There is a slight rSR' morphology in V1 and V2 but no deep S waves in I or V6. This could indicate the presence of a partial right bundle branch block.

  Narrow but large Q waves are present without ST segment deviation in leads II, III and aVF suggesting an old inferior infarction. The deep QS wave in V3 suggest an anterior infaction. The peaked T waves in V3-V6 suggest the presence of acute anterior ischemia.
  Q waves usually evolve later in a Q wave infarction. Here, the Q waves and peaked T waves coexist. An explanation for this is that the Q waves represent an old or remote infarction while the peaked T waves represent an active ischemic process, or that the Q waves have appeared more radily than expected.

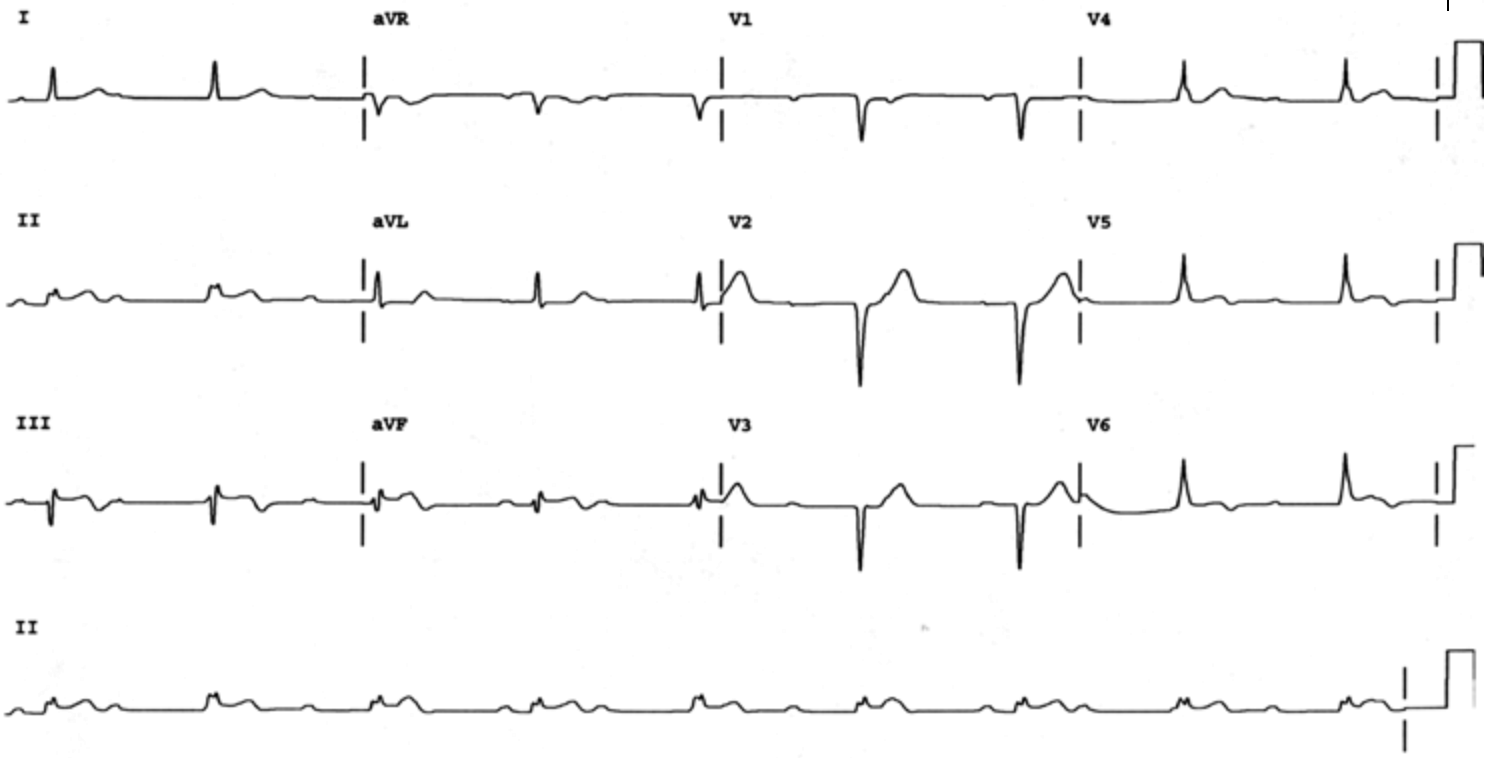
EKG11



Interpretacija11

- This tracing shows sinus tachycardia at a rate of 120/'minute. The PR interval is 175 ms. The third beat of the tracing is probably a ventricular premature beat. There is significant ST elevation in the inferior leads III and aVF showing an acute inferior infarction. The ST depression in the lateral leads may be reciprocal to this inferior infarction. Deep Q waves are seen in V1-V4 along with a poor R wave progression suggest a an old anterior infarction.

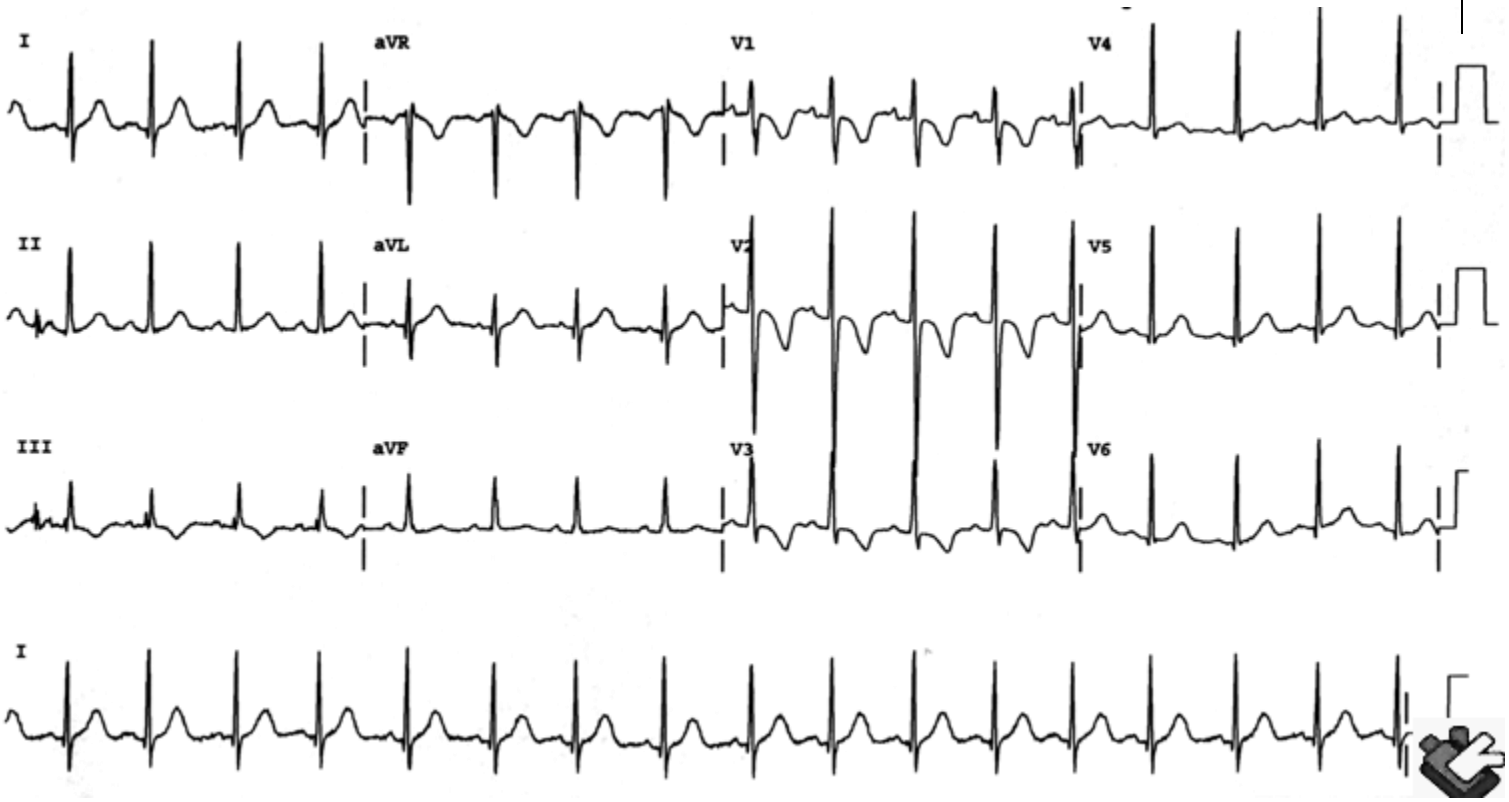
EKG12



Interpretacija12

- The rhythm is complete (3rd degree) atrioventricular block with a nodal escape and a ventricular rate of 50/minute. There is a small but significant ST elevation inferior leads II, III and avF indicating an acute inferior injury. Deep Q waves in V1-V3 show an anterior infarction which is probably old. The ST elevation in leads V5 and V6 suggest latteral wall acute injury.

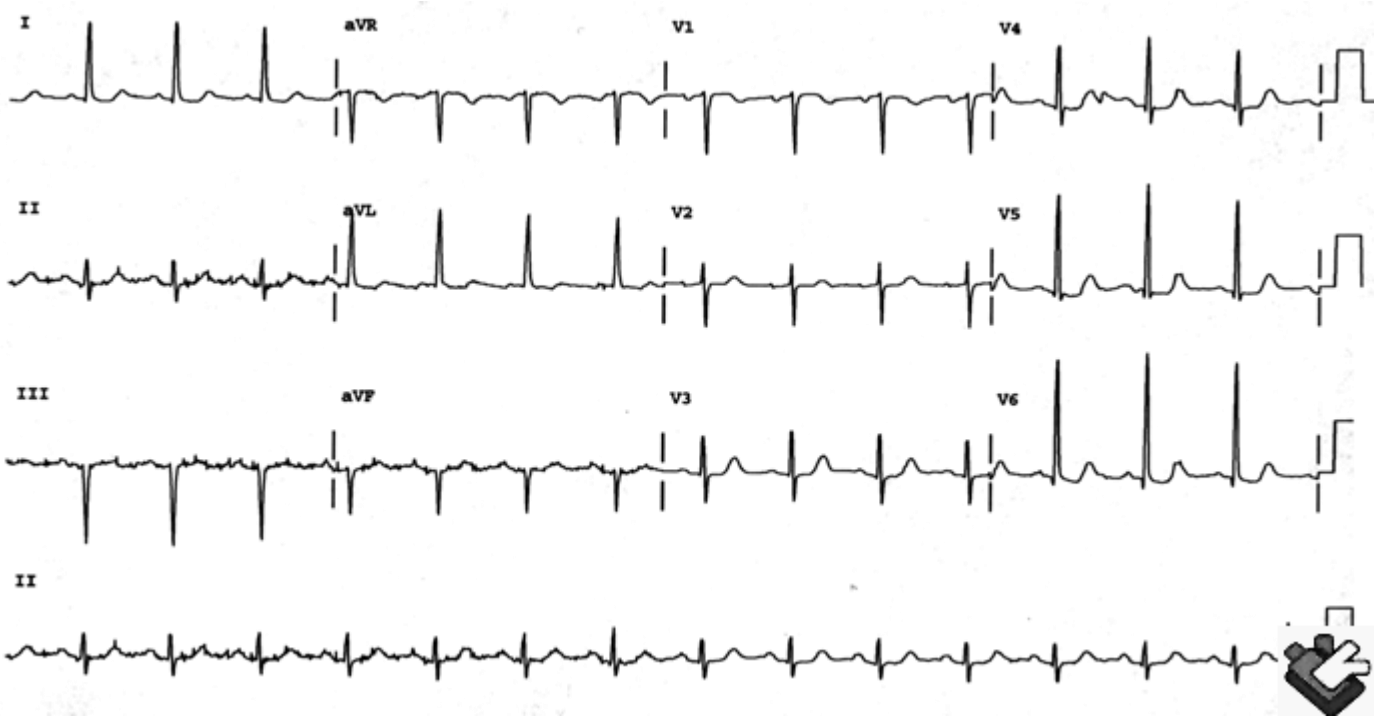
EKG13



Interpretacija13

- This tracing shows sinus tachycardia at a rate of 115/minute. The PR interval is120ms. There are large R waves in the anterior leads V1-V3. This could be the reciprocal equivalent of Q waves posteriorly. These leads also show slight anterior ST segment depression and peaked, inverted T waves which can be interpreted as posterior injury and ischemia (i.e., reciprocal ST segment elevation and peaked T waves).
  Although true posterior wall infarctions are usually associated with an inferior infarction (not seen in this tracing), this tracing does suggest a possible acute true posterior Q wave infarction. The use of posterior EKG electrodes can be helpful cases of suspected true posterior Q wave infarction.

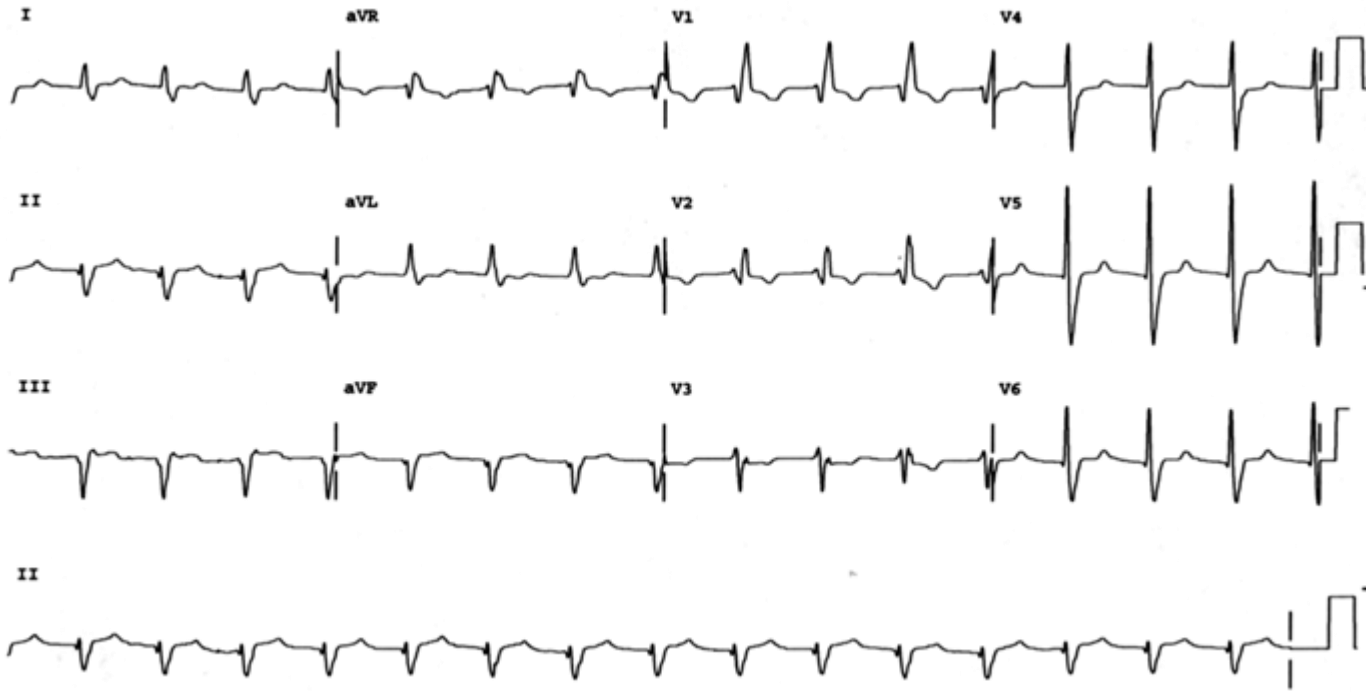
EKG14



Interpretacija14

This tracing shows sinus rhythm at a rate of 87/minute. The PR interval is 175 ms. The small r waves or QS deflections in III and aVF suggest a possible old inferior infarction.

EKG15

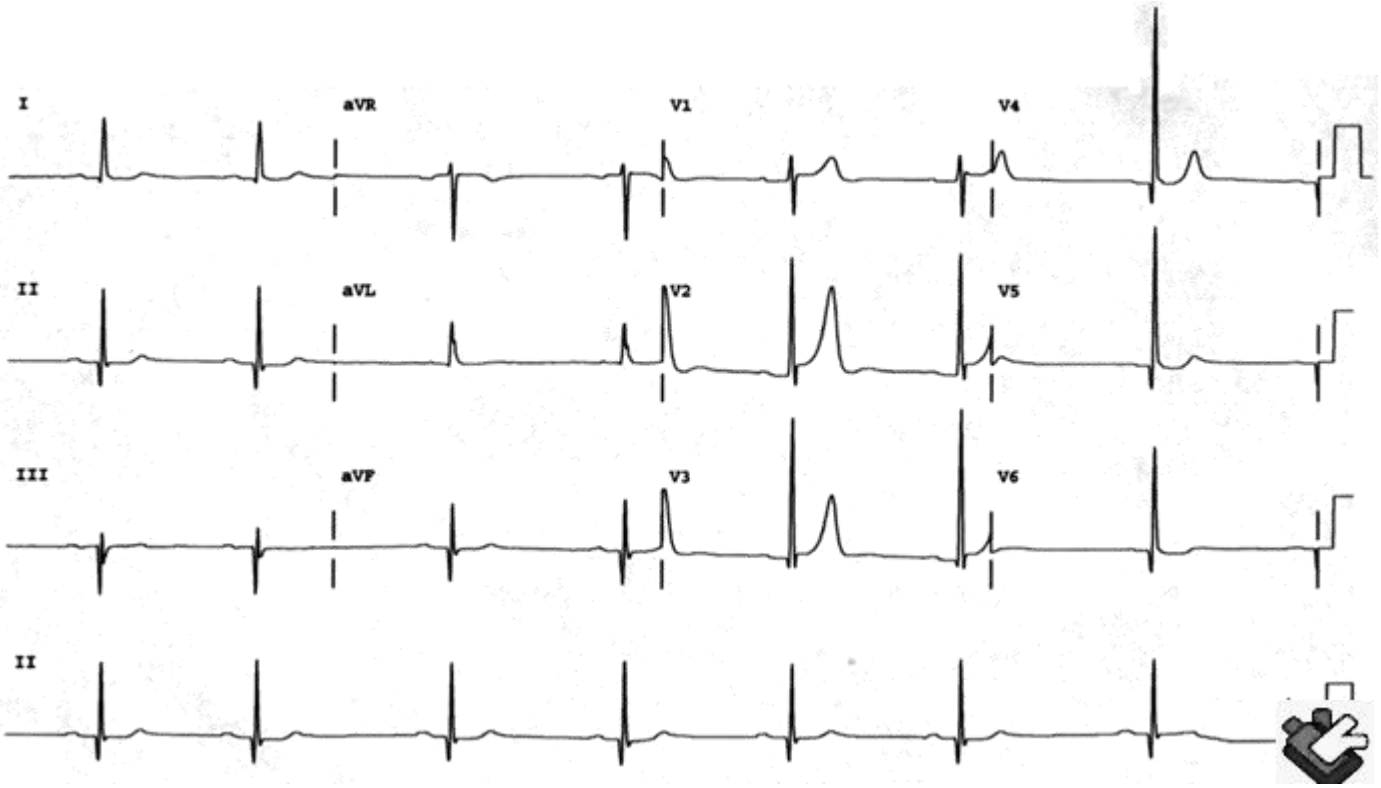


Interpretacija15

- The heart rate is 120/min and the QRS complex durations is 150 ms. There is a conspicuous lack of clearly seen P waves.
  Ventricular tachycardia is possible with the QRS complex duration of 150 ms but is unlikely as the r in V1 is small, the R/S ratio in lead V6 is less than one and there is no sign of AV dissociation or of capture beats. The rhythm is probably a sinus tachycardia with first degree heart block (P waves falling on the T waves) or a junctional tachycardia.

  Right bundle branch block is indicated by rSR' variant morphology in V1-V3 and wide, slurred S waves in I and V6. There is a left axis deviation. Inferior infarction is indicated by the qs complexes in III and aVF. It is probably old.

EKG16

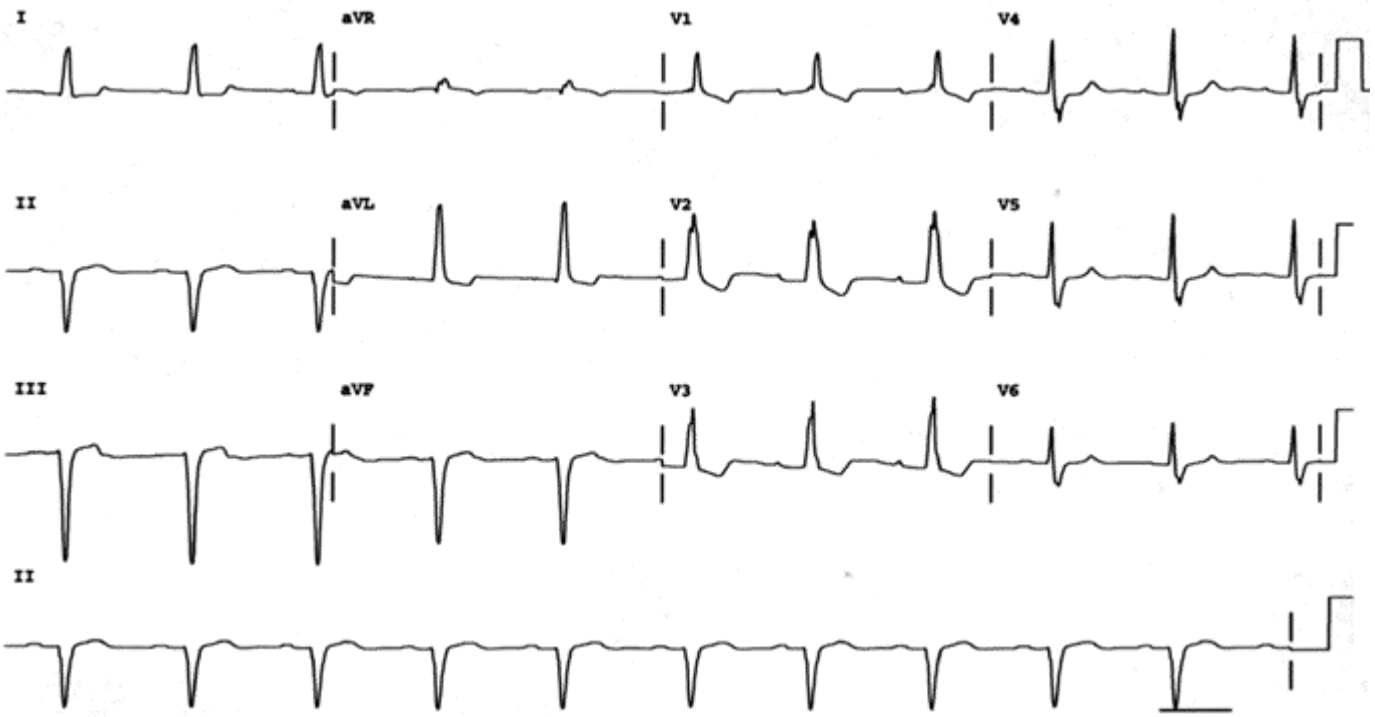


Interpretacija16

- This tracing shows sinus bradycardia. The rate is 45/minute. The PR interval is 200ms. There is high voltage R waves in V2 and V5 which could suggest biventricular hypertrophy.

  The peaked T waves in V2 and V3 along with slight ST segment elevation in those leads suggest the early stages of an acute anterior infarction although similar findings can be found with what is called "early replarization". There are deep but narrow Q waves in II, II and aVF suggesting a remote inferior infarction.

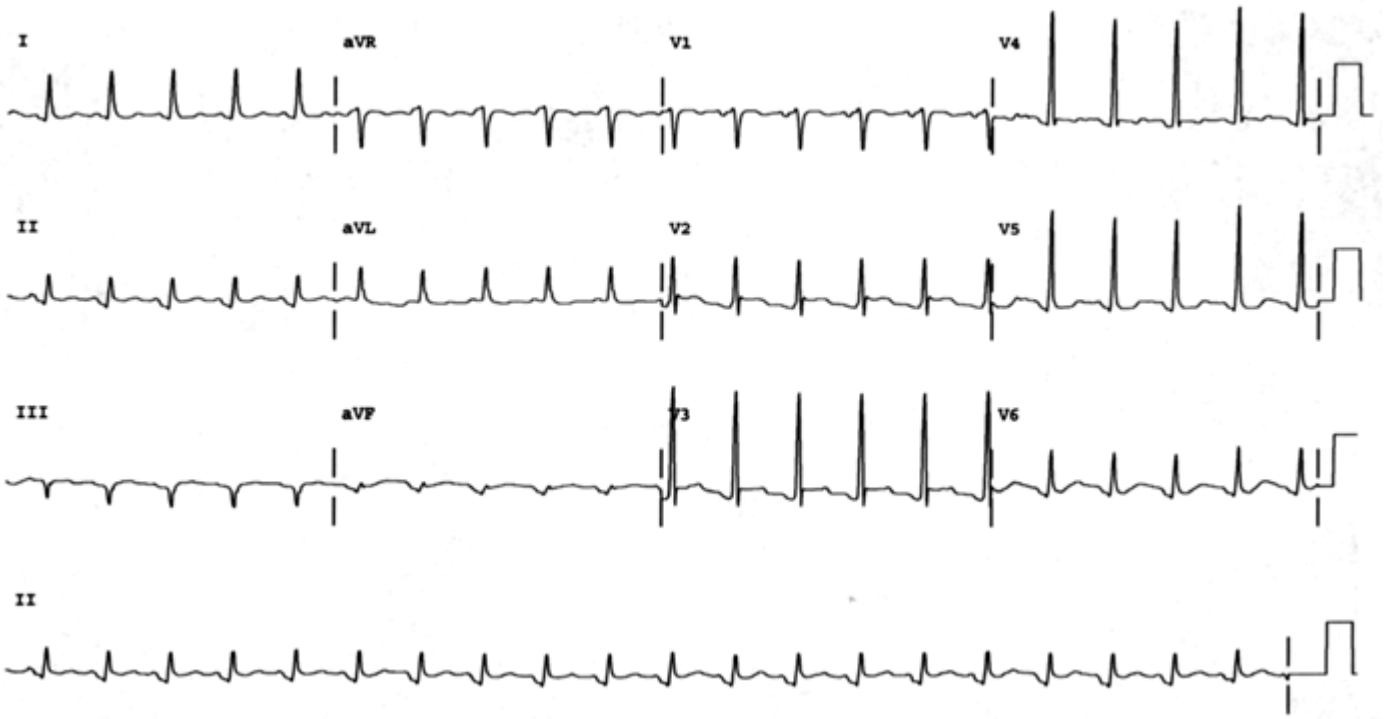
EKG17



Interpretacija17

- This tracing shows sinus rhythm. The rate is 60/minute. There is an M shaped QRS complex (rSR' variant) in leads V1 to V3. In addition there are deep and slurred S waves in V6. There are also prominent S waves proceeded by very small r waves in II, III and aVF as well as a left axis deviation of -60. Together, these findings suggest bifascicular block: right bundle branch and left anterior hemiblock (The left axis deviation could also represent an old inferior infarction with regenerated R waves in the inferior leads).
- There is ST segment depression in leads V1 to V3. This probably indicates reciprocal changes due to the conduction disturbance and is not subendocardial ischemia of the anterior wall or an acute transmural injury of the posterior wall

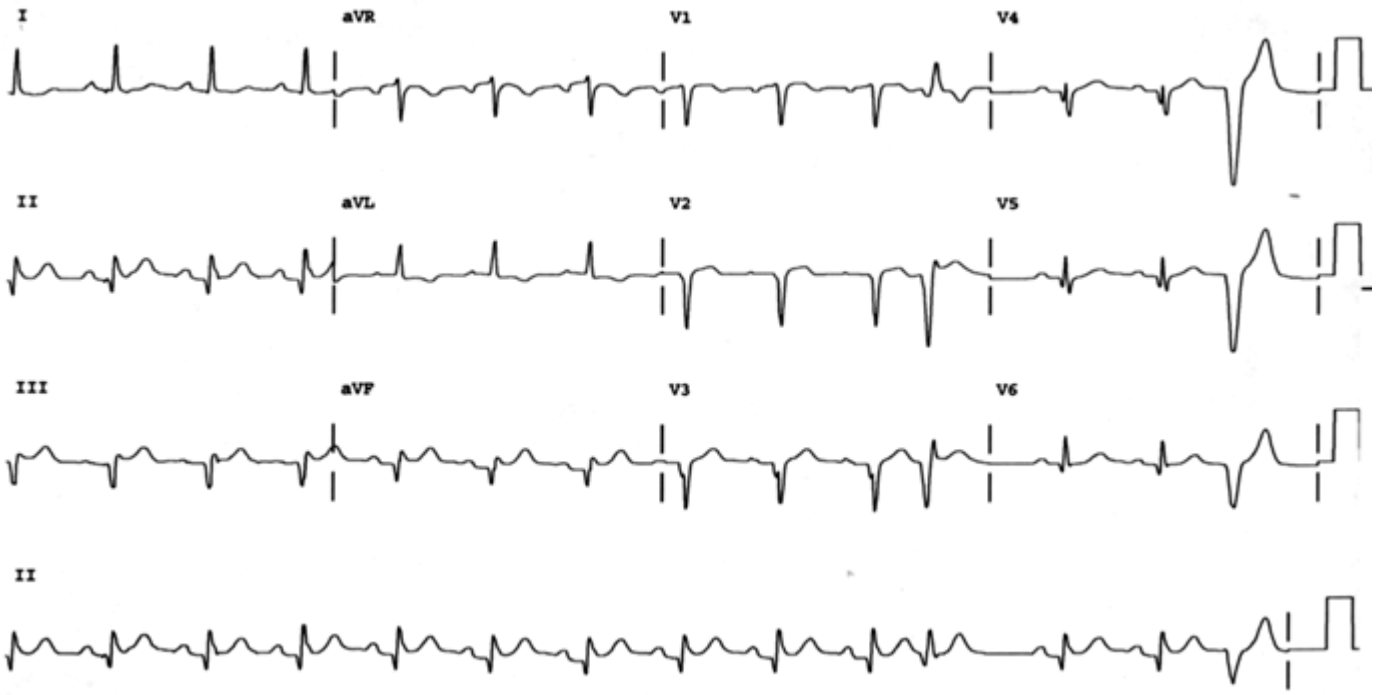
EKG18



Interpretacija18

- This tracing shows sinus tachycardia. The rate is 123/min. The PR interval is normal at 120ms. The Q waves in II, III and aVF suggest an inferior infarction. The slight ST elevation in the inferior leads and more pronounced elevation in leads V2-V3 suggest acute injury or infarction.

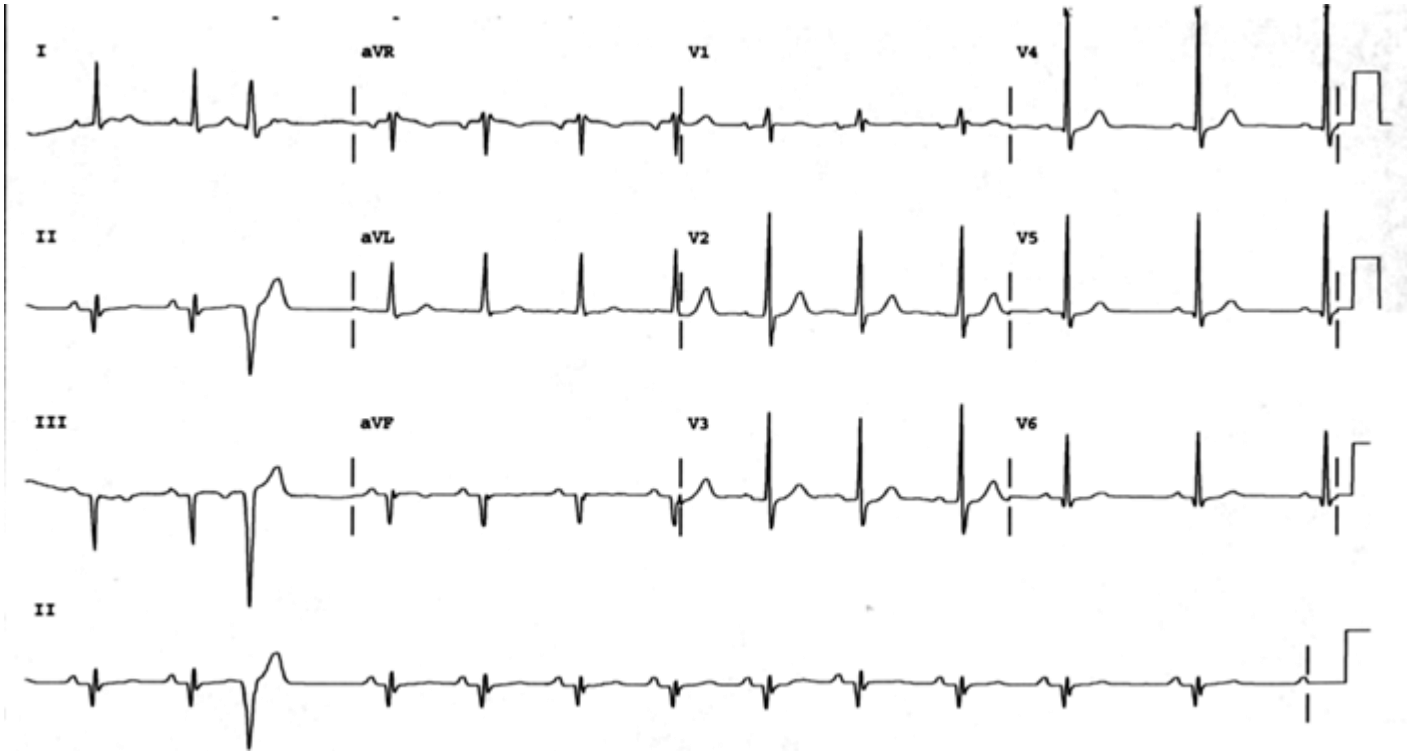
EKG19



Interpretacija19

- This tracing shows sinus rhythm. The rate is 80/minute. Beat #11 and #14 are premature ventricular beats (as suggested by the wide QRS complex, the compensatory pause {first beat} and the absence of a preceding P wave). An inferior infarction (possibly acute) is suggested by the presence of slight ST segment elevation and Q waves in leads II, III and aVF. Q waves are also seen in precordial leads V1-V4 suggestive of an old anterior infarction. The tracing would have to be compared to an old one to determine if the infarctions are new or old.

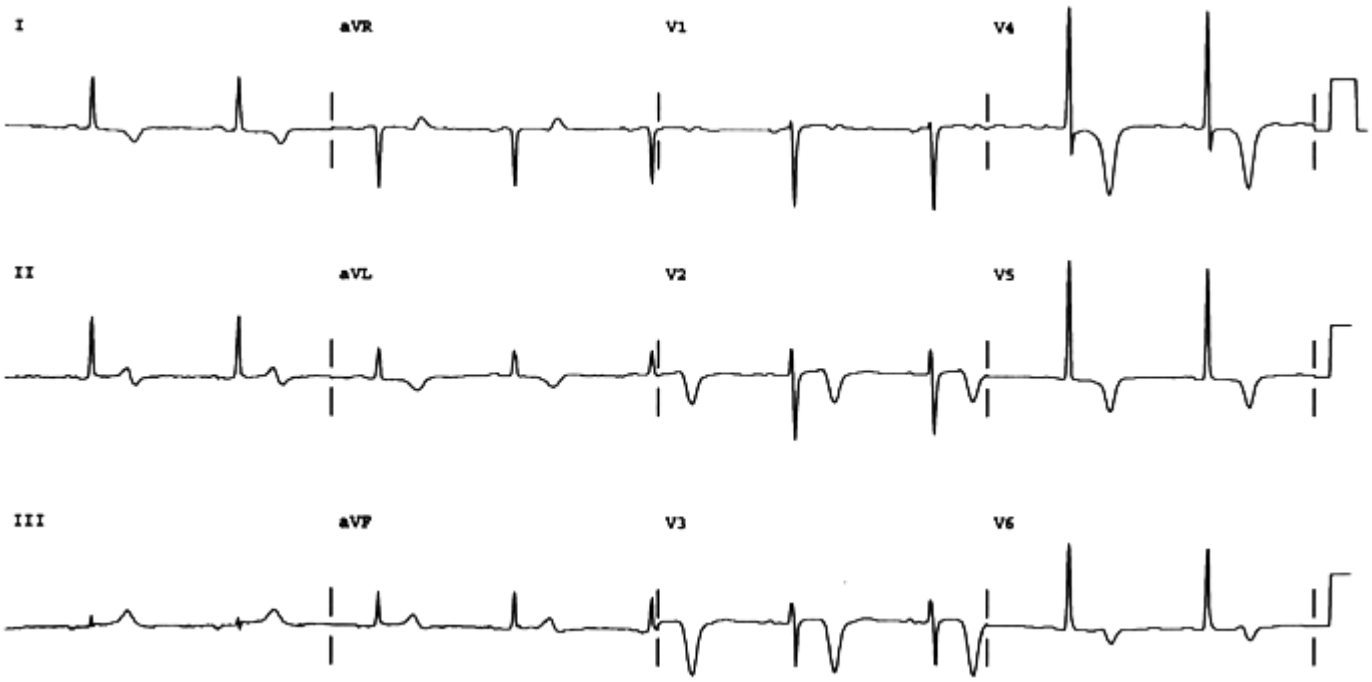
EKG20



Interpretacija20

- The rhyhtm is sinus rhythm with a rate of 80/minute. There is a premature ventricular contraction (on the third beat). Note the compensatory pause after the PVB. There are Q waves in II, III and avF which indicate the presence of an inferior infarction. Since there is no ST-segment deviation, the infarct is probably old. The significant and wide R wave in V1 suggests a posterior infarction.

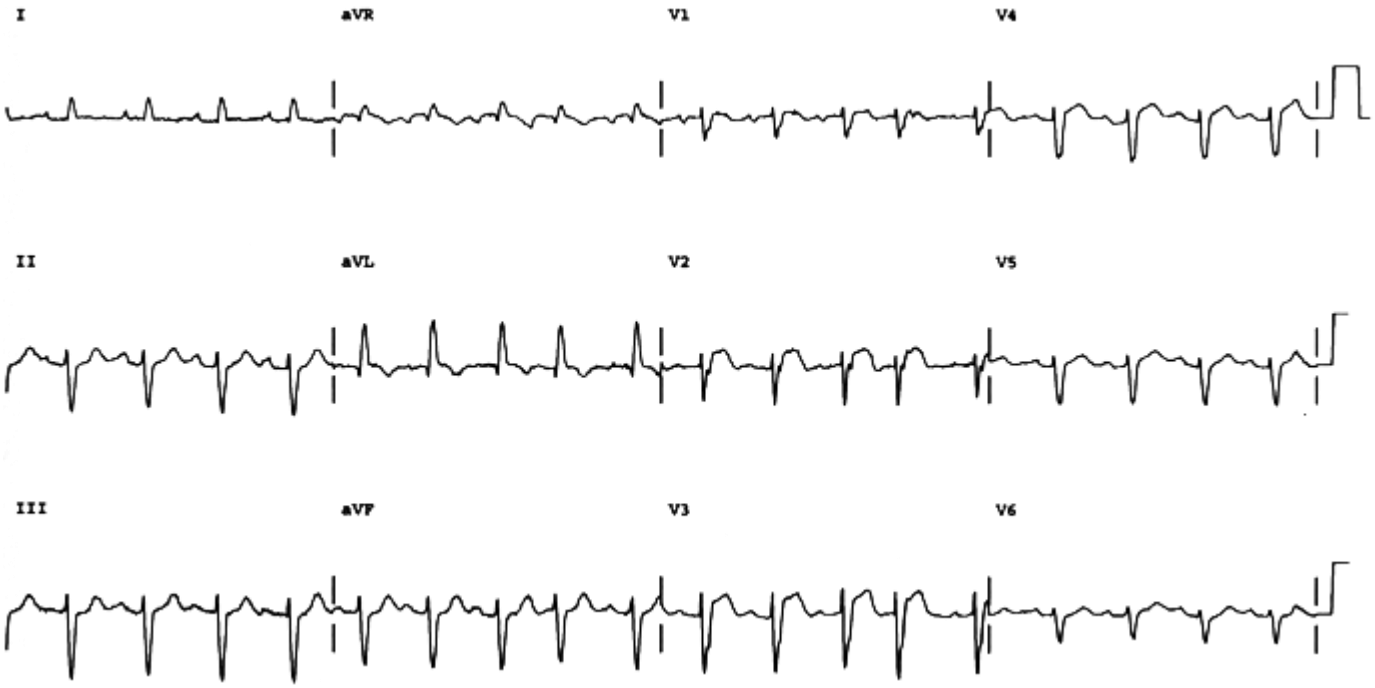
EKG21



Interpretacija21

- The recording shows sinus rhythm at a rate of 55/minute. The PR interval is 180 ms. There is T wave inversion in both the lateral and the anterior leads. There is ST segment depression in V4. This is probably a non-Q wave anterior infarction

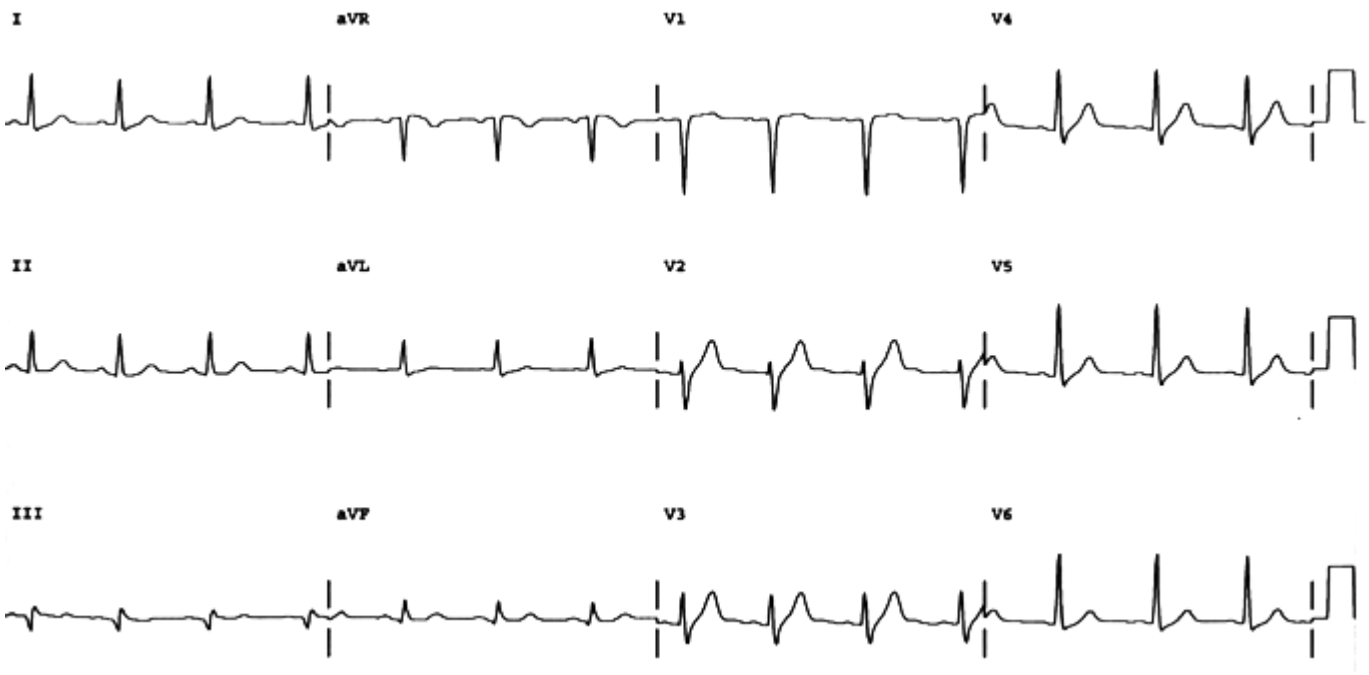
EKG22



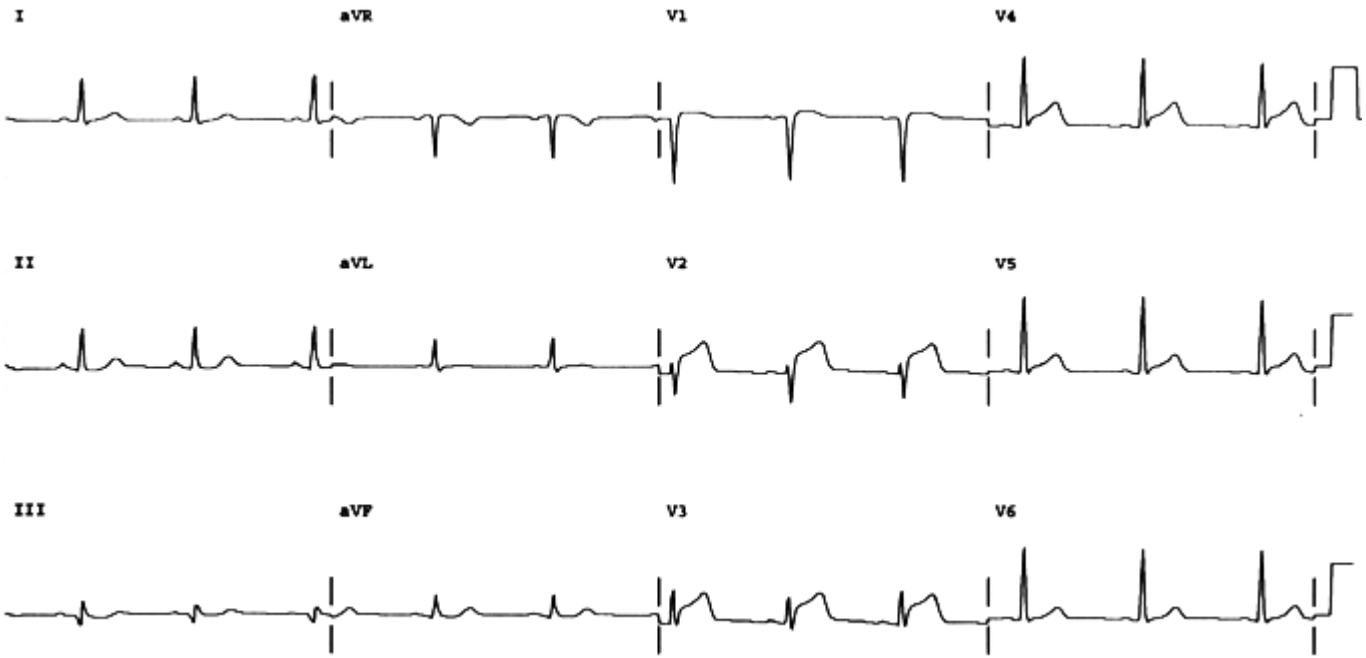
Interpretacija22

- The recording shows sinus tachycardia with a rate of 110/minute, the eight beat is an atrial premature beat. The PR interval is 180 ms. There is a left axis deviation of -70 degrees. There is a left anterior hemiblock.
- There is ST segment elevation in V2-V5 which indicates acute anterior injury/infarction. This is most likely an acute anterior infarction.
- There is also poor R wave progression which is probably related to the left anterior hemiblock.

EKG23-1



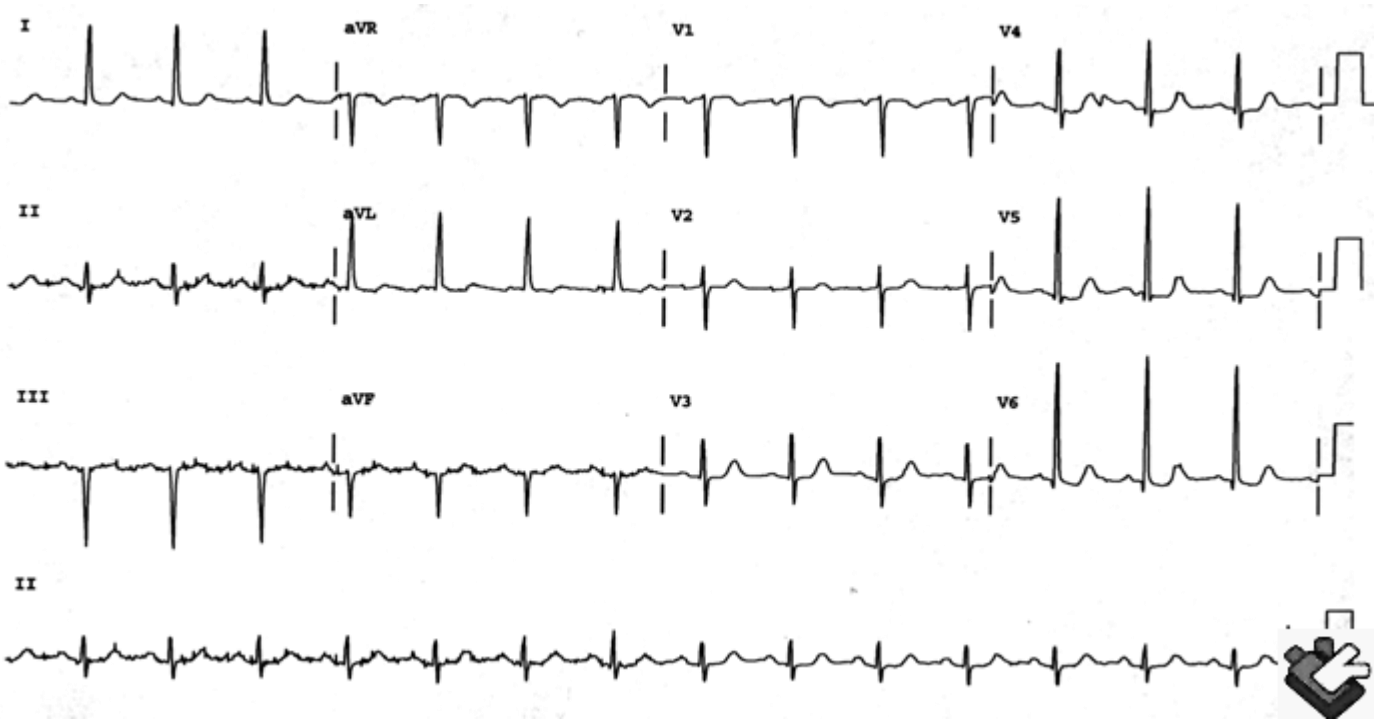
EKG23-2



Interpretacija23

- The recording shows sinus rhythm with a rate of 80/minute. The PR interval is 160 ms. There are relatively tall T waves in the anterior leads suggesting the presence of early anterior wall ischemia/injury. The Q waves in III are not significant as there are no significant Q waves in the other inferior leads.

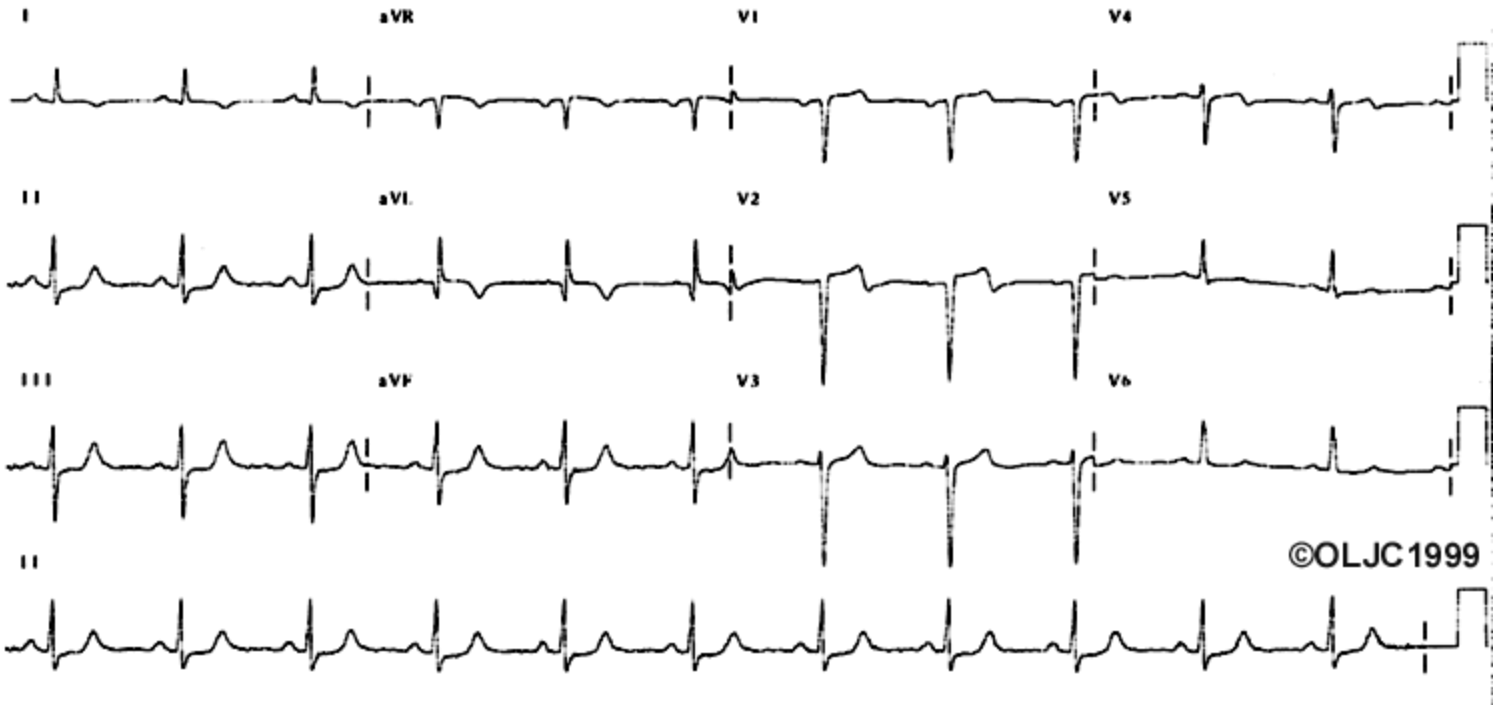
EKG24



Interpretacija24

- The recording shows sinus rhythm with marked T wave inversions in the precordial leads. This is consistent with anterior wall ischemia or possibly a non-Q myocardial infarction. This patient in fact did have a non-q myocardail infarction.

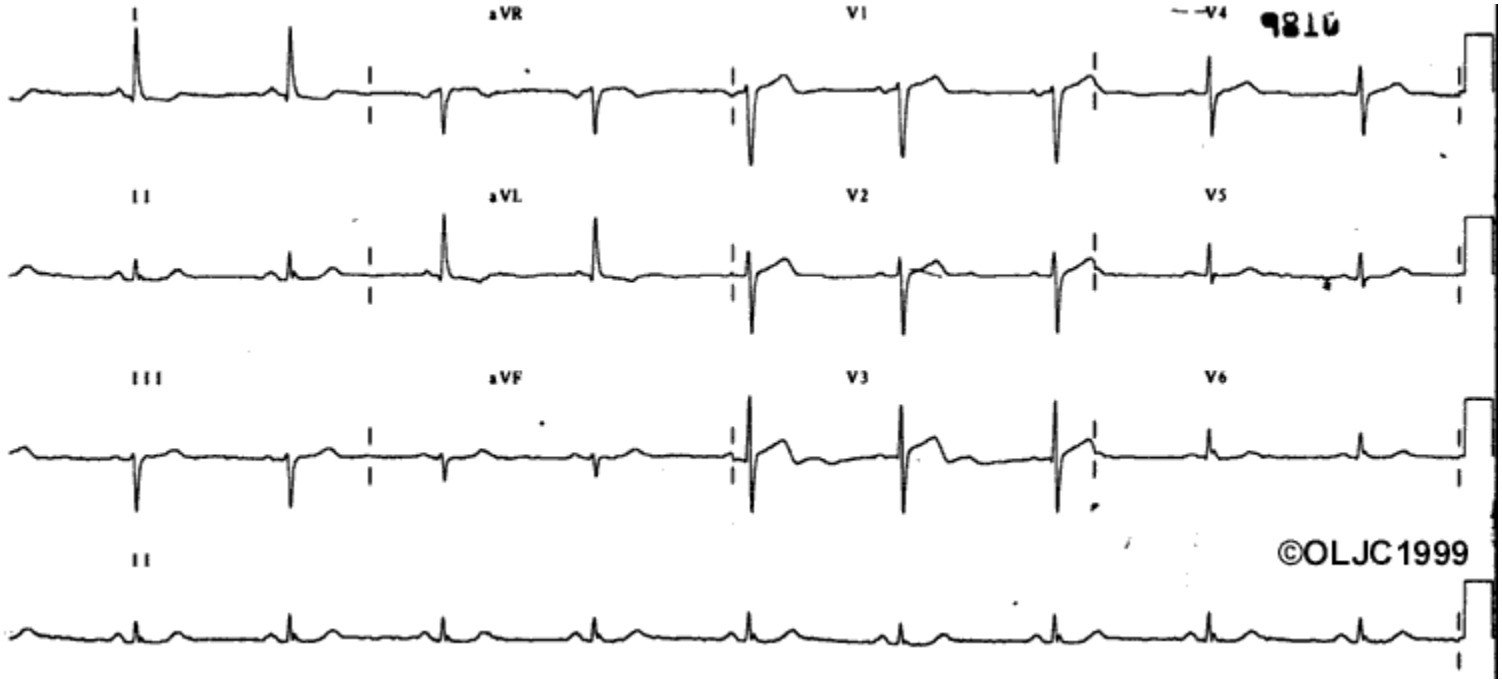
EKG25



Interpretacija25

- This recording shows sinus rhythm. The remarkable feature is the some what poor R wave progression in the V1 and V2 leads and the ST elevation and T wave changes in leads V1 to V4 and I and aVL. The cardiogram suggests an anterior/ lateral MI possibly acute. There is also terminal p wave negativity in V1 suggesting a left atrial abnormality

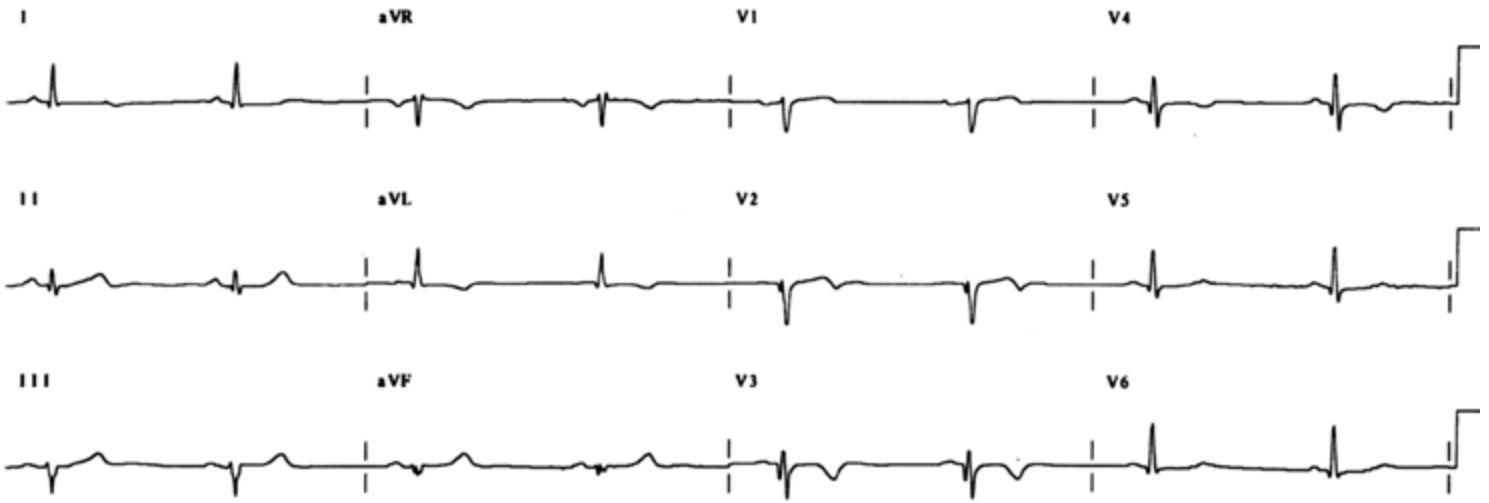
EKG26



Interpretacija26

- In this case, in spite of the story of atypical chest pain and an initial cardiogram that the EKG machine interpreted as probable LVH with secondary repolarization changes, the patient evolved a non-Q MI. An angiogram showed a significant narrowing in the left anterior descending artery.

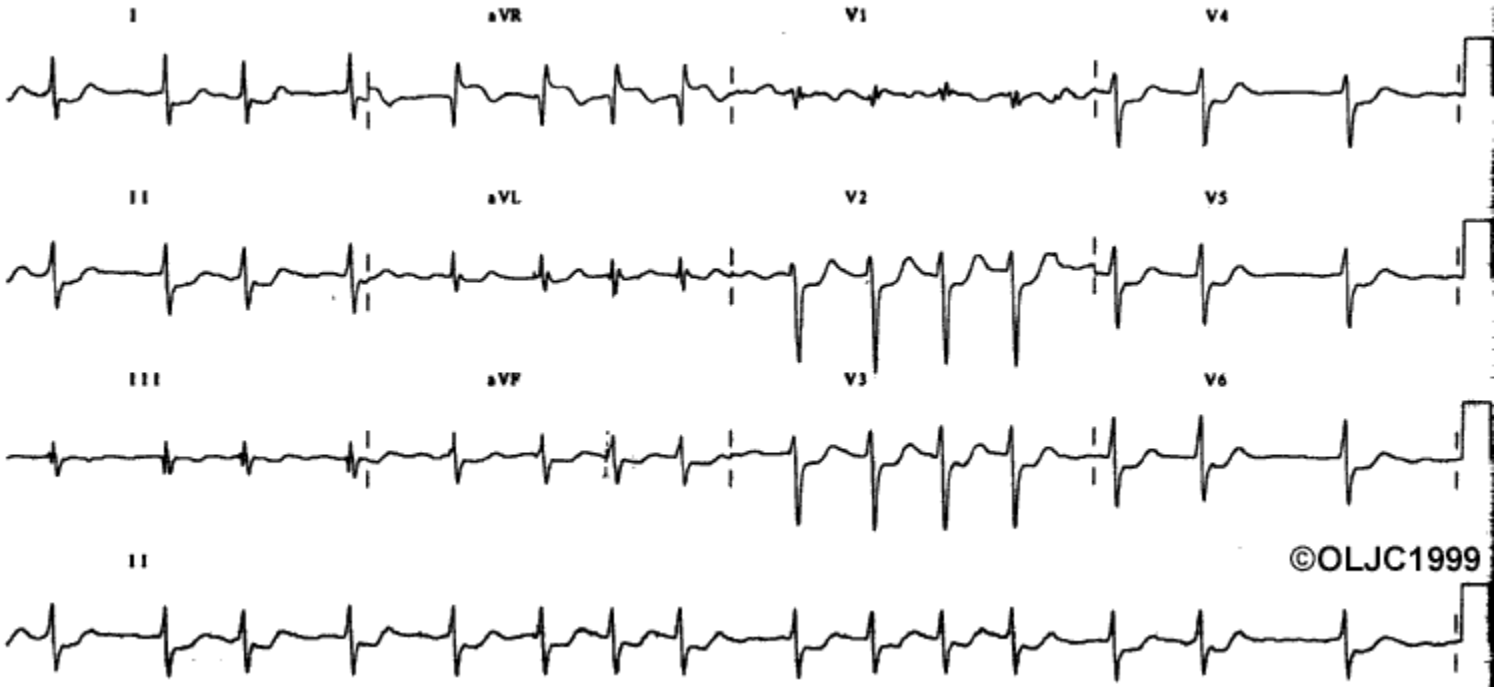
EKG27



Interpretacija27

- The cardiogram shows sinus bradycardia at 47/min. and a poor r wave progression in the anterior chest leads with Q waves in leads V2 to V4 which are diagnostic of anterior myocardial infarction. Note that unlike the normal septal Q waves that start later in the progression of the chest leads and at the same time grow larger, the Q waves in this patient are abnormal because they are present in leads V2, V3, and V4 and are larger than those in V5 and V6.
- The cardiogream also shows abnormal T wave inversion and slicht ST ellivation in leads V1 to V3.

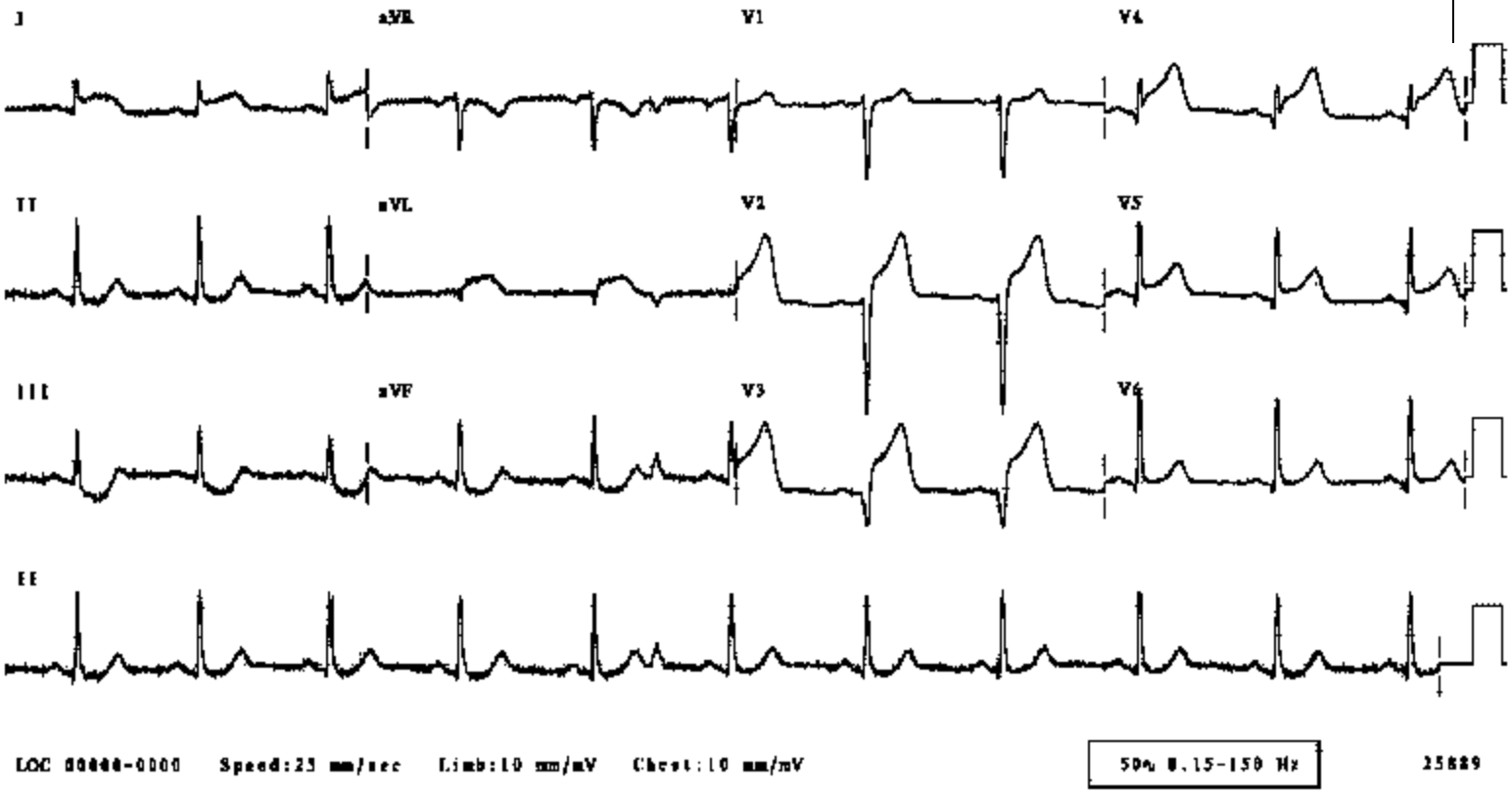
EKG28



Interpretacija28

- The recording shows atrial fibrillation with wide spread ST depressions suggestive of ischemia or possibly non-Q myocardial infarction. In this case there were no enzyme changes suggestive of a myocardial infarction and the changes probably represent ischemia secondary to the ventricular tachycardia terminated by the lidocaine. It is also possible that the ST changes are purely a result of the tachycardia but in this case this would seem unlikely.

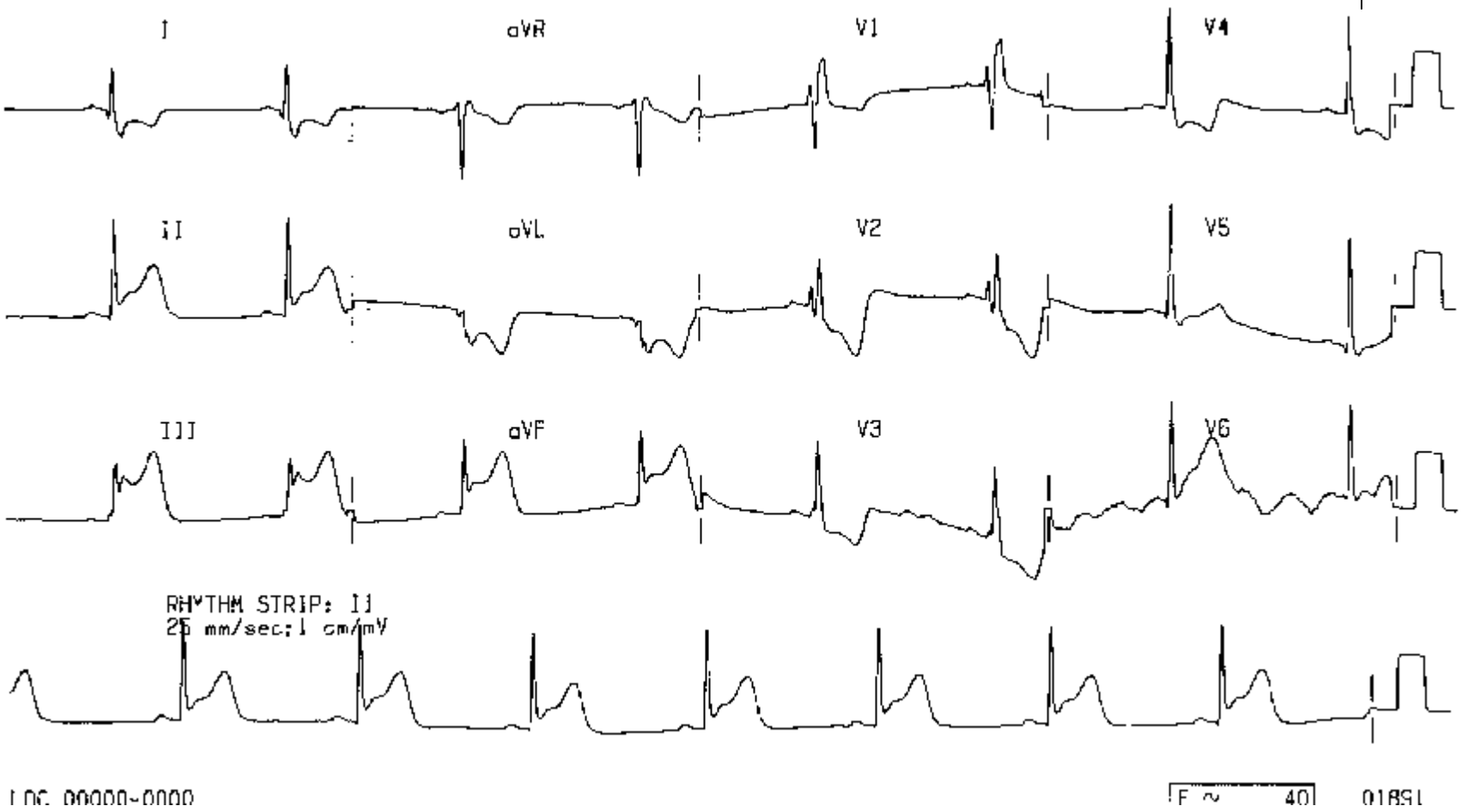
EKG29


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
II
LOC 00000-0000 Speed:25 mm/sec Limb:10 mm/mV Chest:10 mm/mV
50Hz 0.15-150 Hz
25889

Interpretacija29

- A 63 year old woman with 10 hours of chest pain and sweating.
- This cardiogram shows:
- Acute anterior myocardial infarction ST elevation in the anterior leads V1 - 6, I and aVL reciprocal ST depression in the inferior leads

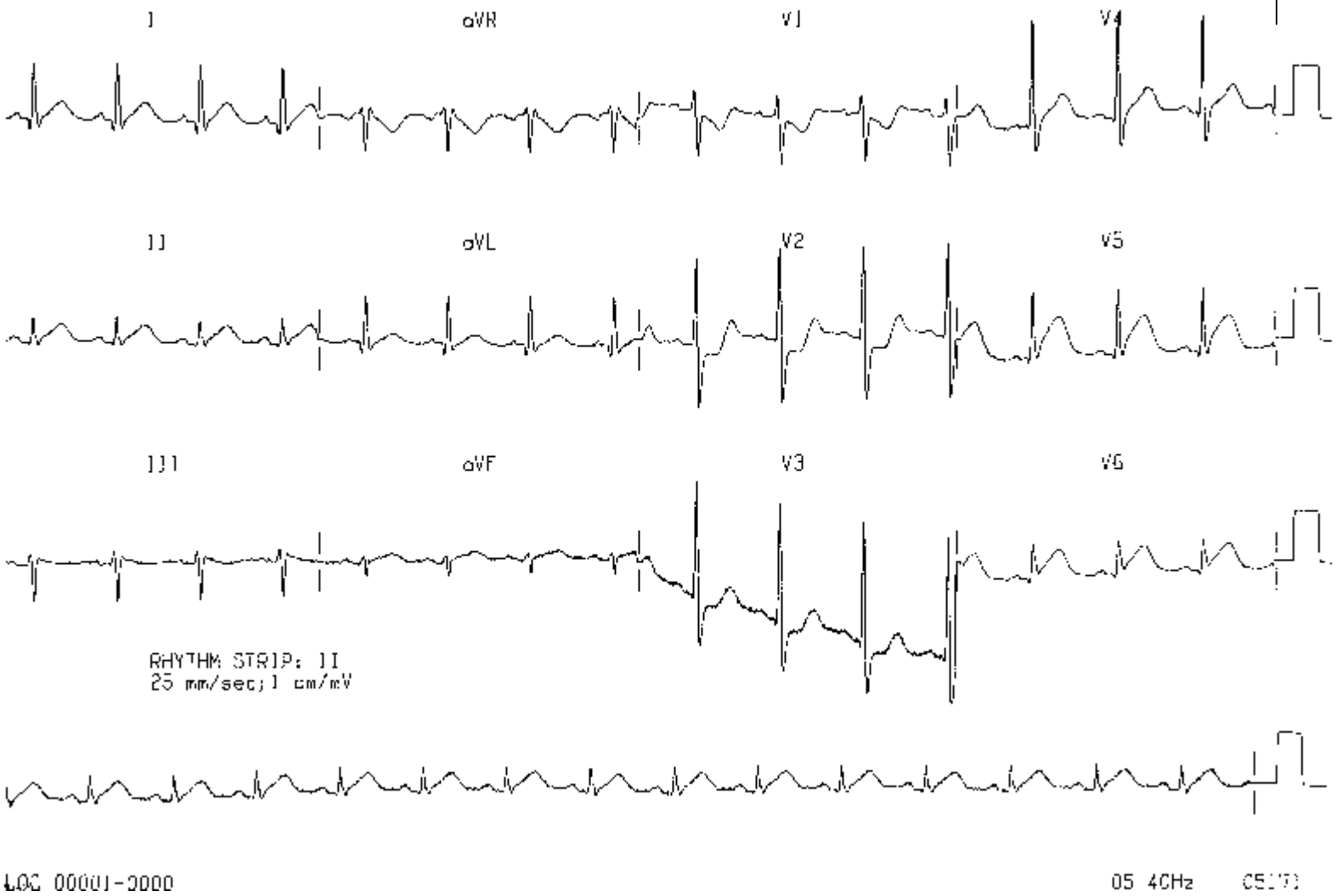
EKG30


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
RHYTHM STRIP: II
25 mm/sec;1 cm/mV

Interpretacija30

- A 55 year old man with 4 hours of "crushing" chest pain.
- Acute inferior myocardial infarction
- ST elevation in the inferior leads II, III and aVF
- reciprocal ST depression in the anterior leads

EKG31


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
RHYTHM STRIP: II
25 mm/sec; 1 cm/mV
05 40Hz

Interpretacija31

- A 60 year old woman with 3 hours of chest pain.
- Acute posterior myocardial infarction
- (hyperacute) the mirror image of acute injury in leads V1 - 3
- (fully evolved) tall R wave, tall upright T wave in leads V1 -3
- usually associated with inferior and/or lateral wall MI