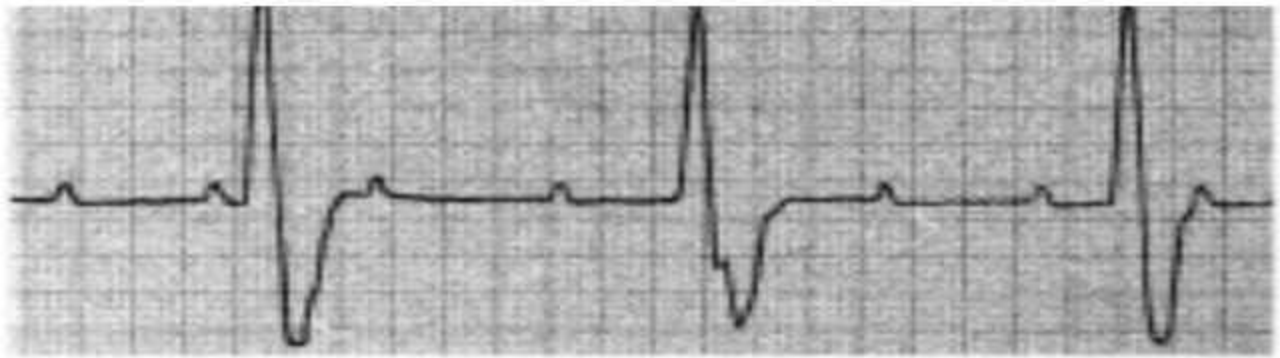
3° AV BLOCK
("COMPLETE" BLOCK)

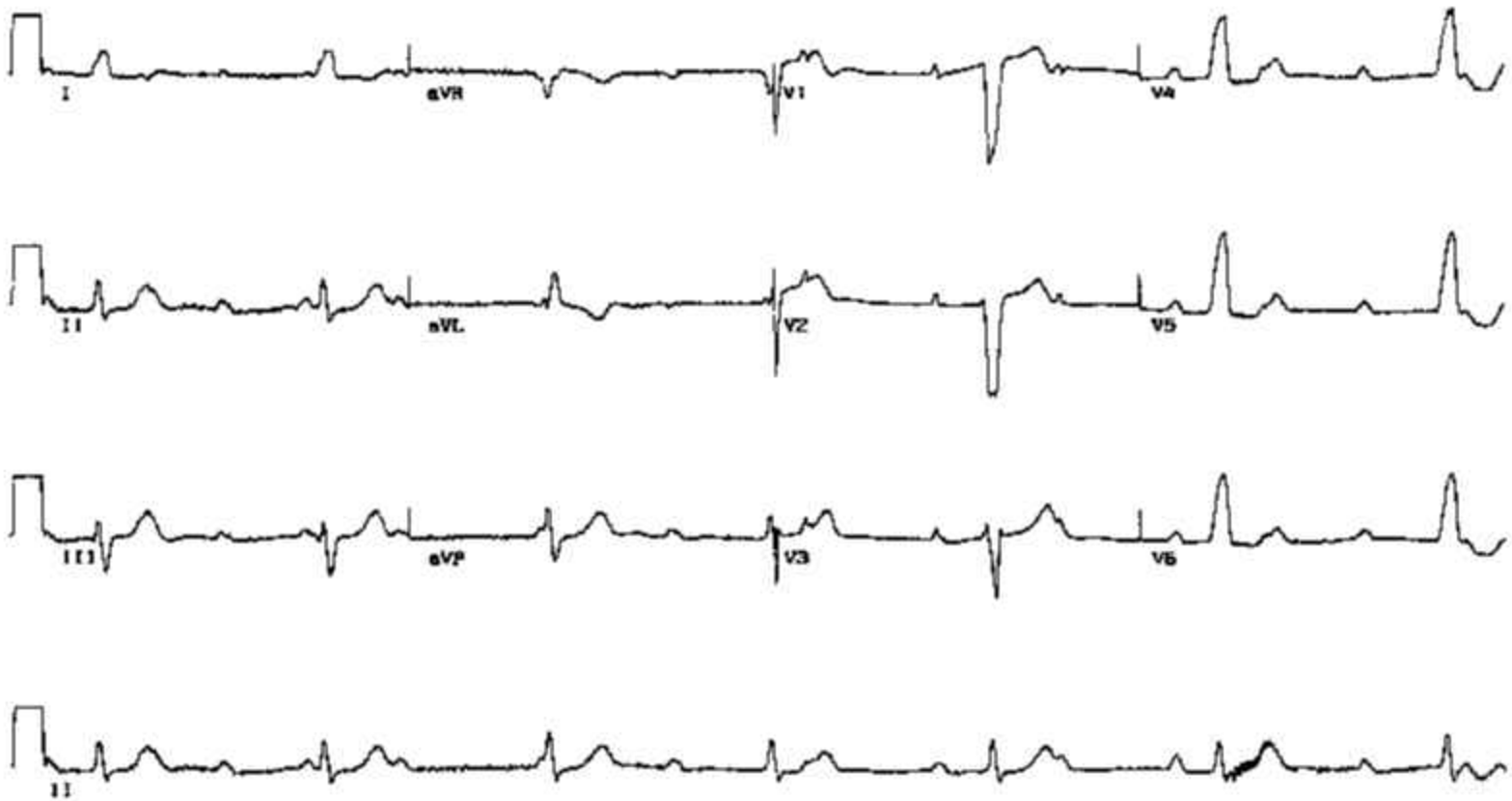
- P waves of SA node origin
- QRS's if narrow, and if the ventricular rate is 40-60/min., then origin is a junctional focus.

3° AV BLOCK
("COMPLETE" BLOCK)



- P waves of SA node origin
- QRS's if PVC-like, and if the ventricular rate is 20-40/min., then origin is a ventricular focus.

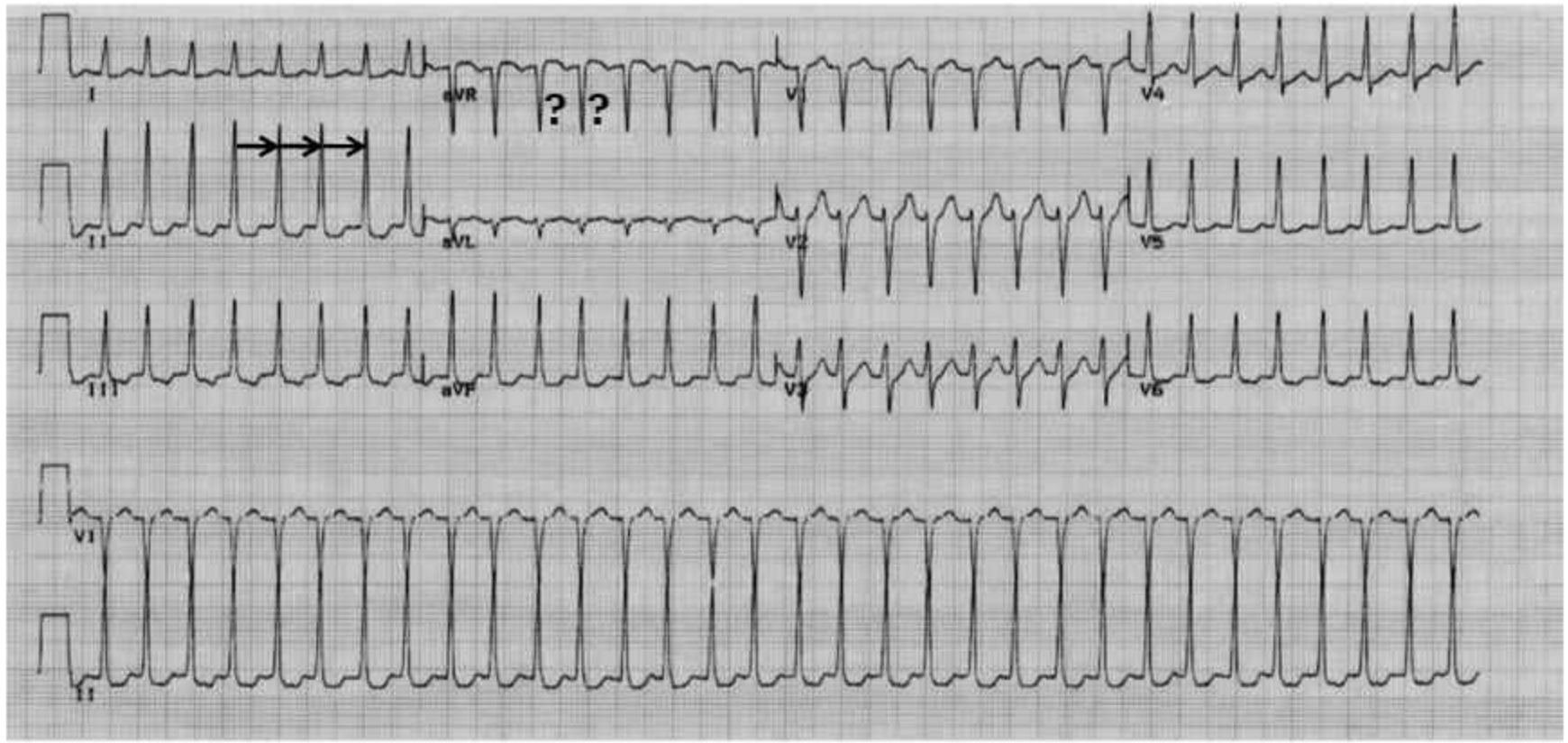
3° AV BLOCK



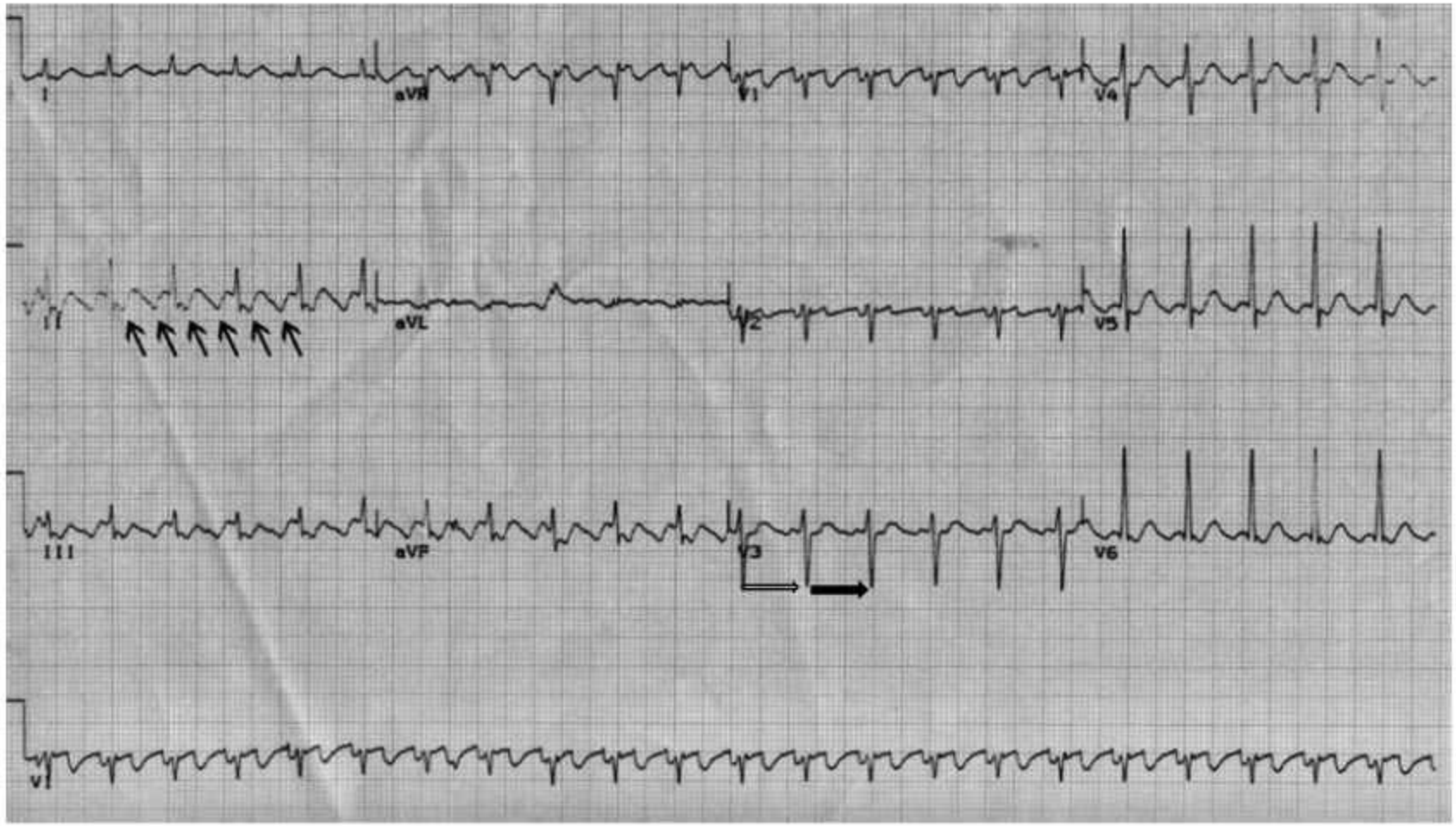
TACHYARRHYTHMIAS

QRS Width
narrow
wide
regular
irregular
regular
irregular
P+
P-
P+
P-
P+
P-
P+
P-
Sinus tachycardia
PSVT,
A.Flutter
MAT
AF
Sinus tachycardia
+ BBB
PSVT, A.Flutter +
Aberrancy, BBB
VT
MAT + BBB,
aberrancy
AF + BBB,
Aberrancy

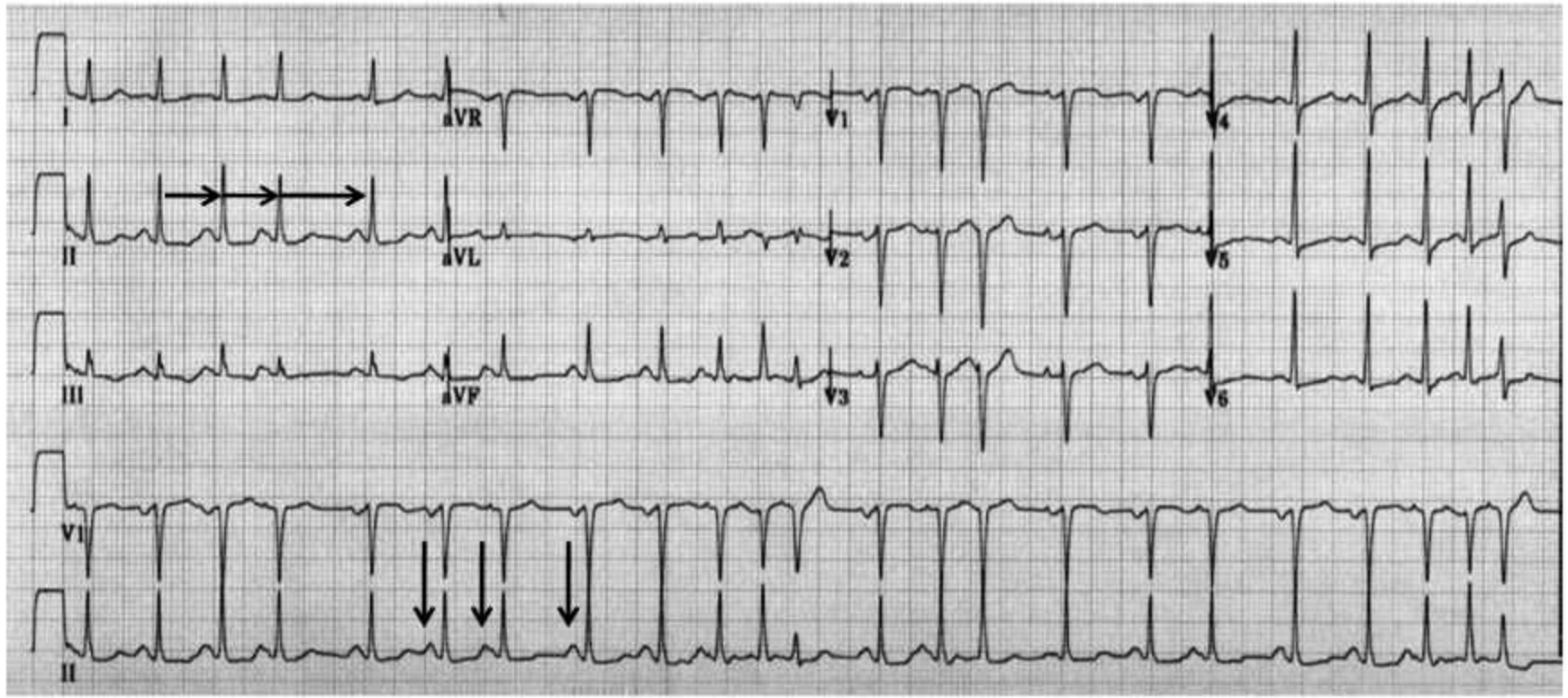
PSVT



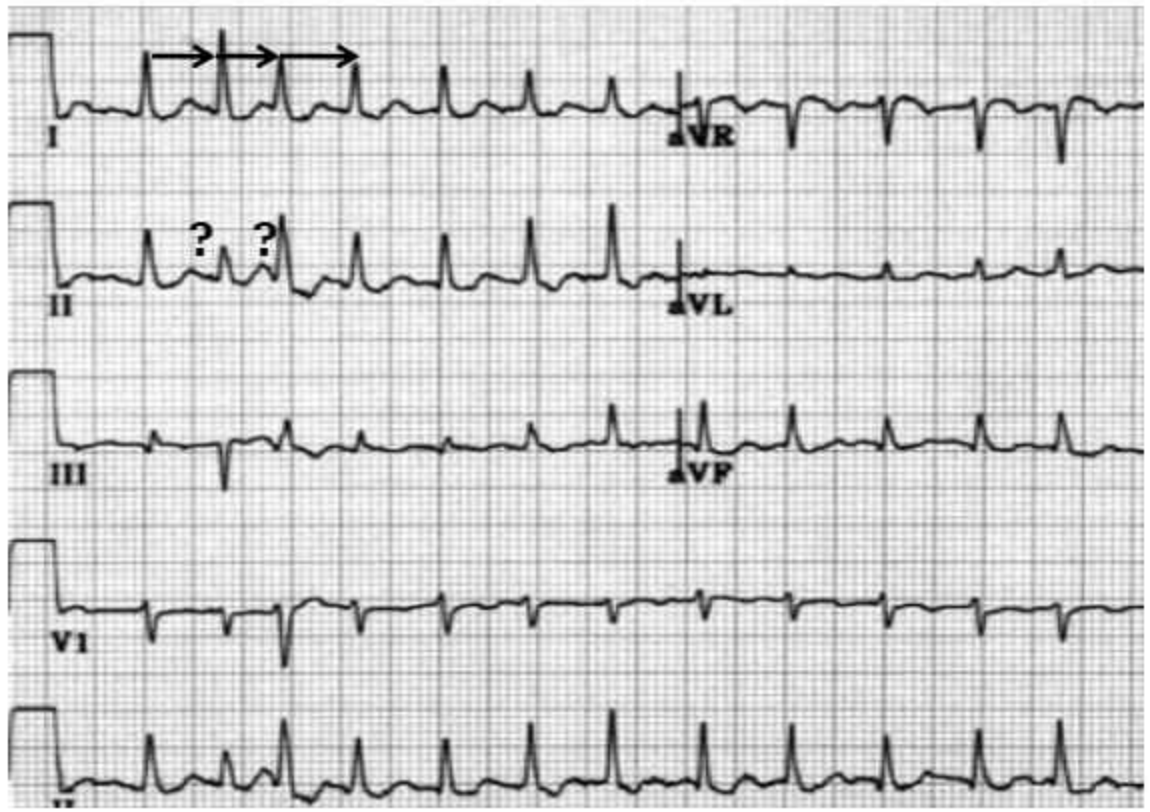
ATRIAL FLUTTER



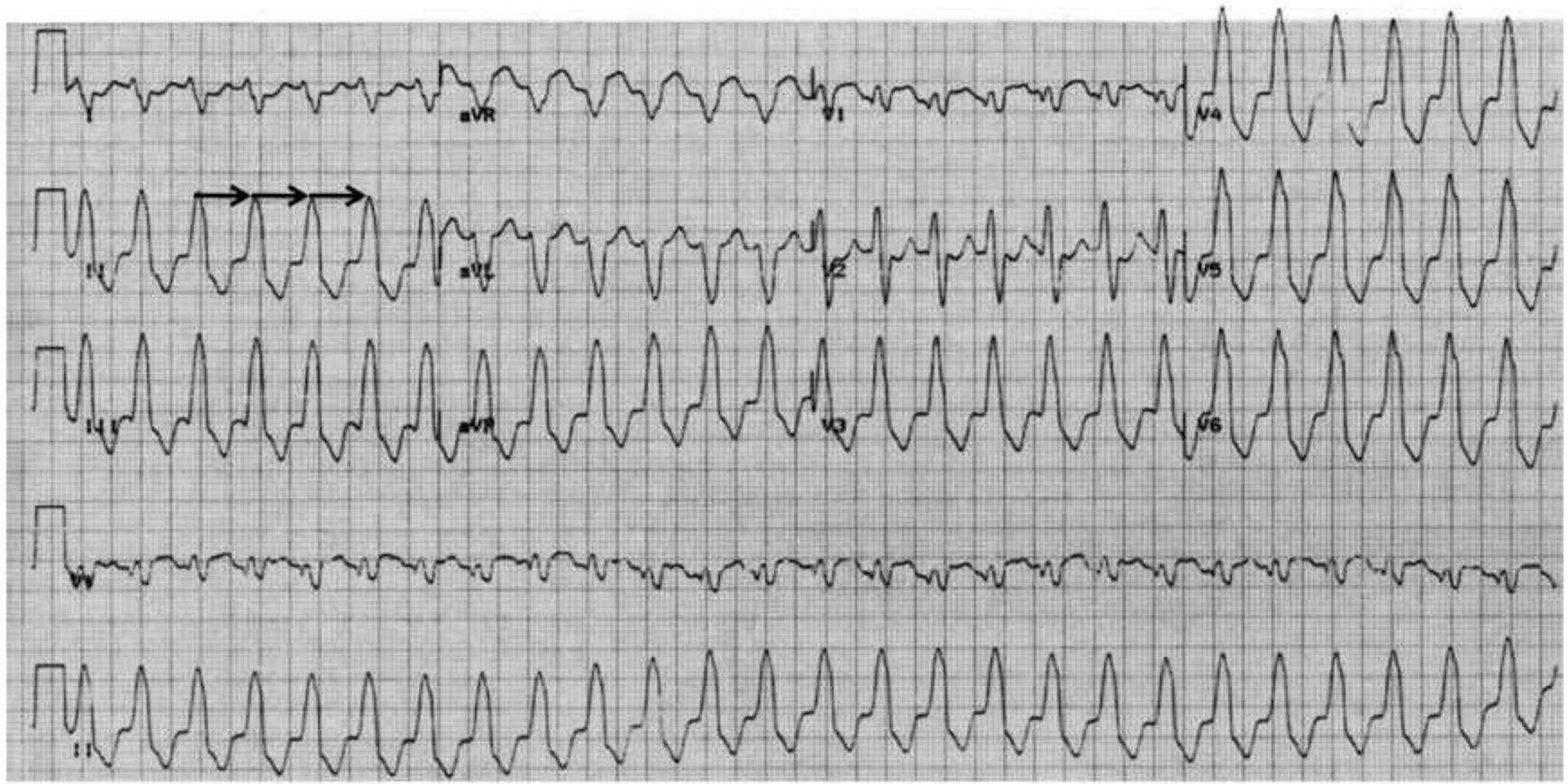
MAT



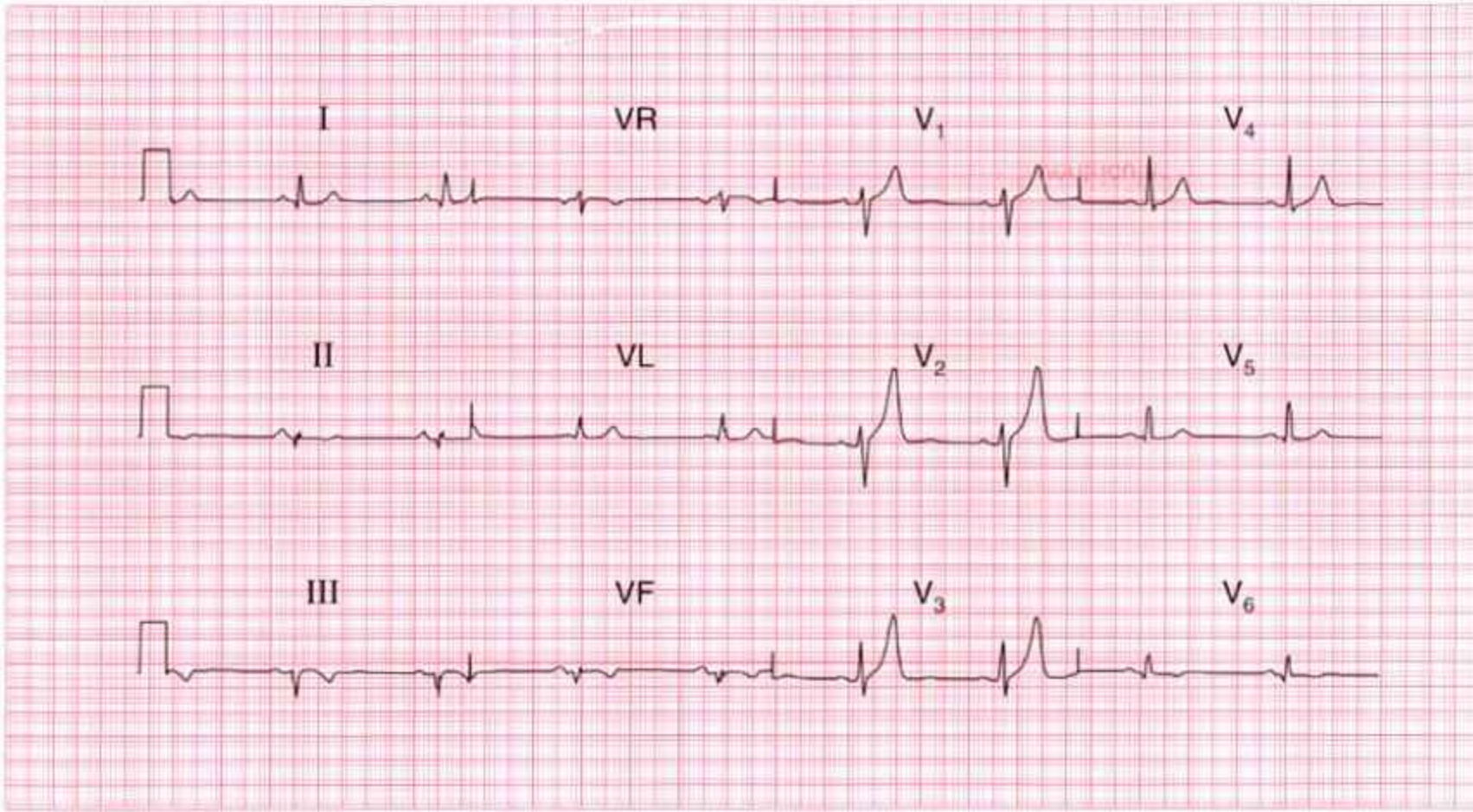
AF



VT



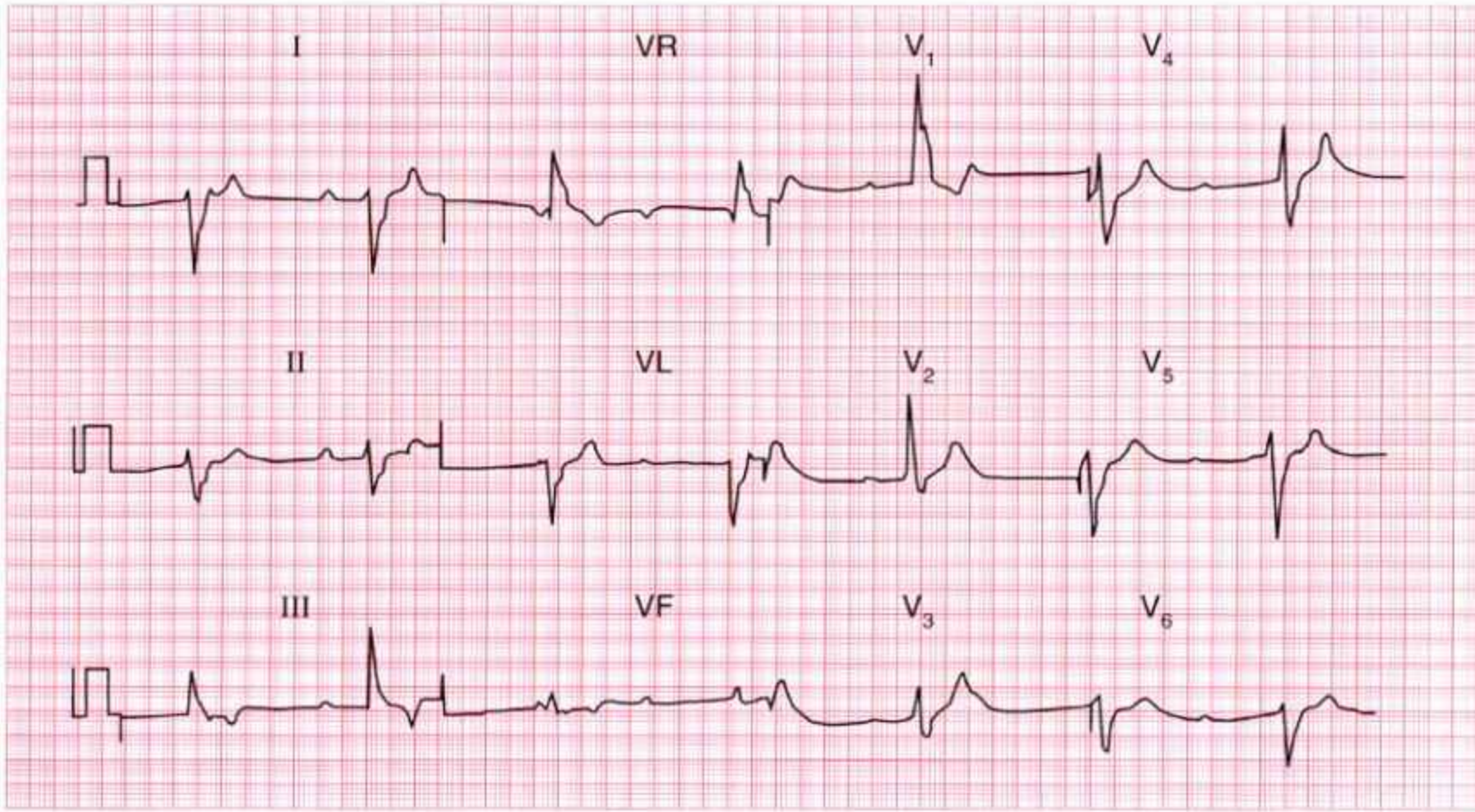
A 60-YEAR-OLD MAN WAS SEEN AS AN OUT-PATIENT, COMPLAINING OF RATHER VAGUE CENTRAL CHEST PAIN ON EXERTION. HE HAD NEVER HAD PAIN AT REST. WHAT DOES THIS ECG SHOW AND WHAT WOULD VOU DO NEXT



OLD INF WALL MI

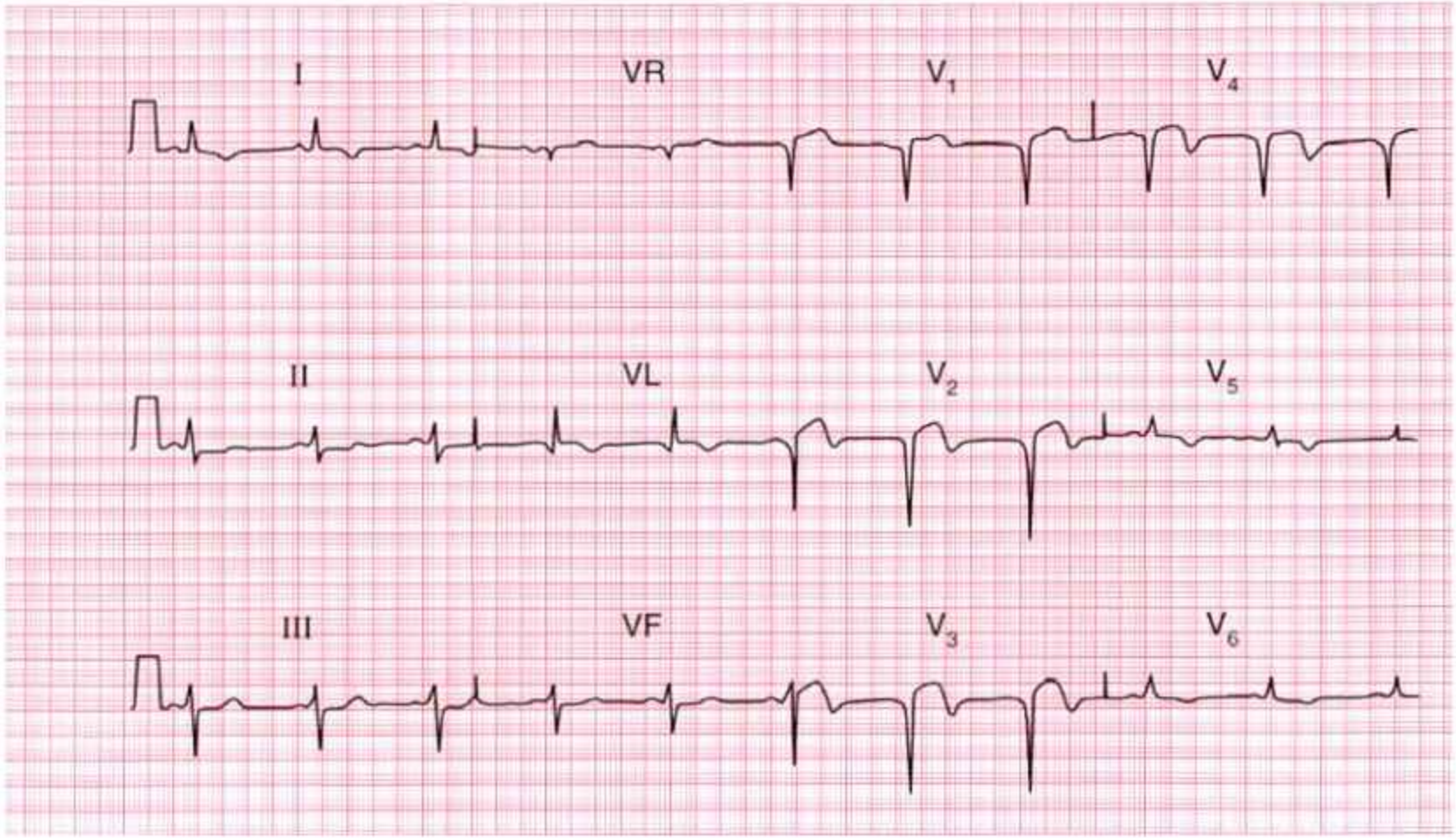
- The ECG shows:
- • Sinus rhythm
- • Normal axis
- • Small Q waves in leads II, III, VF
- • Biphasic T waves in leads II, V6; inverted T
- waves in leads III, VF
- • Markedly peaked T waves in leads *V1-V2*

AN 80-YEAR-OLD WOMAN, WHO HAD PREVIOUSLY HAD *A* FEW ATTACKS OF DIZZINESS, FELL AND BROKE HER HIP. SHE FOUND TO HAVE A SLOW PULSE, AND THIS IS HER ECG. WHAT DOES THE ECG SHOW AND WHAT SHOULD BE DONE?N



- The ECG shows:
- • Complete heart block
- • Ventricular rate 45/min

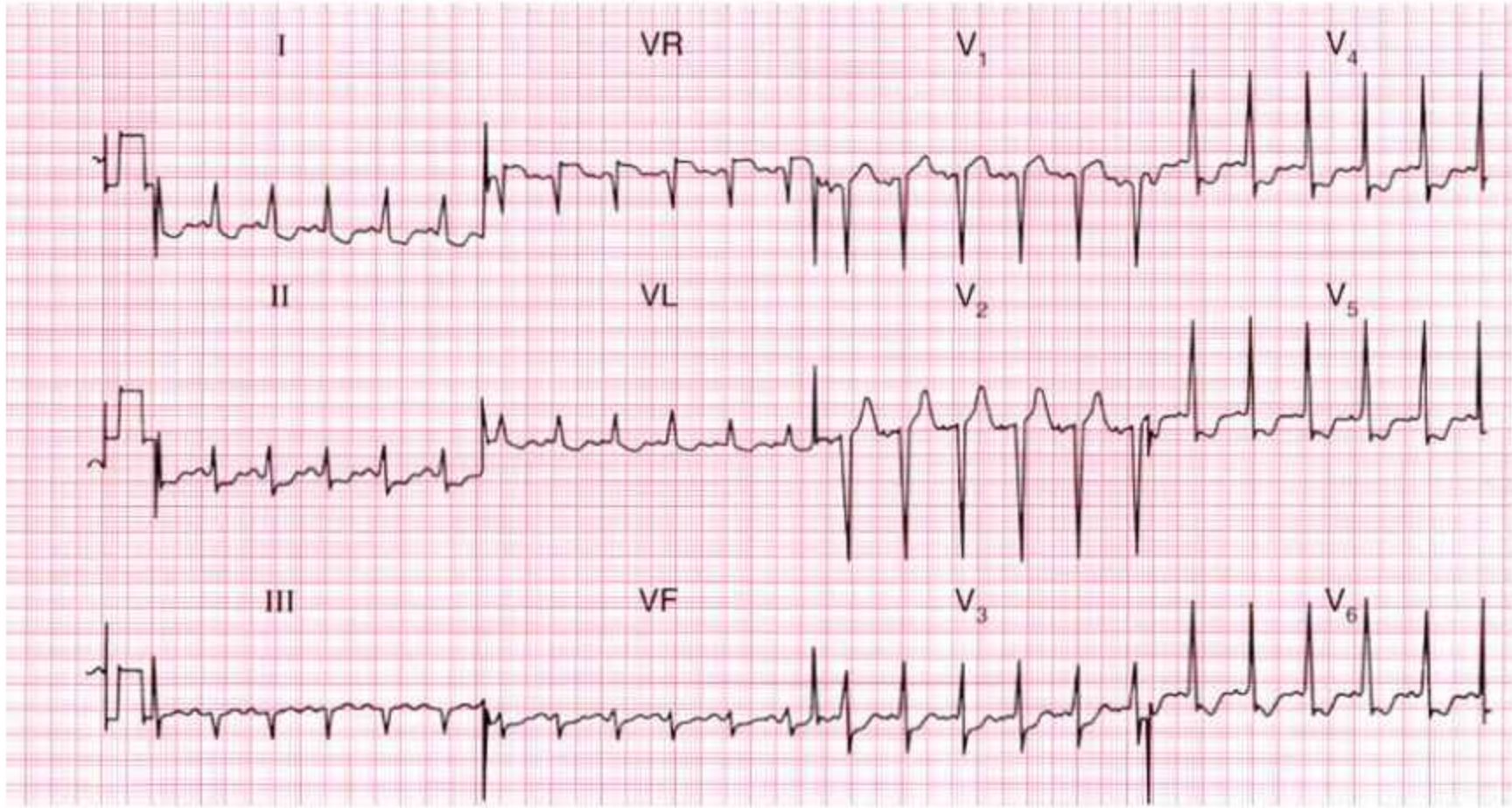
A 50-YEAR-OLD MAN IS SEEN IN THE ED DEPARTMENT WITH SEVERE CENTRAL CHEST PAIN WHICH HAS BEEN PRESENT FOR 18 H. WHAT DOES THIS ECG SHOW AND WHAT WOULD YOU DO?



CLASSIC ANT WALL MI

- The ECG shows:
- • Sinus rhythm
- • Normal axis
- • Q waves in leads V2-V4
- • Raised ST segments in leads V2-V4
- • Inverted T waves in leads I, VL, V2-V6

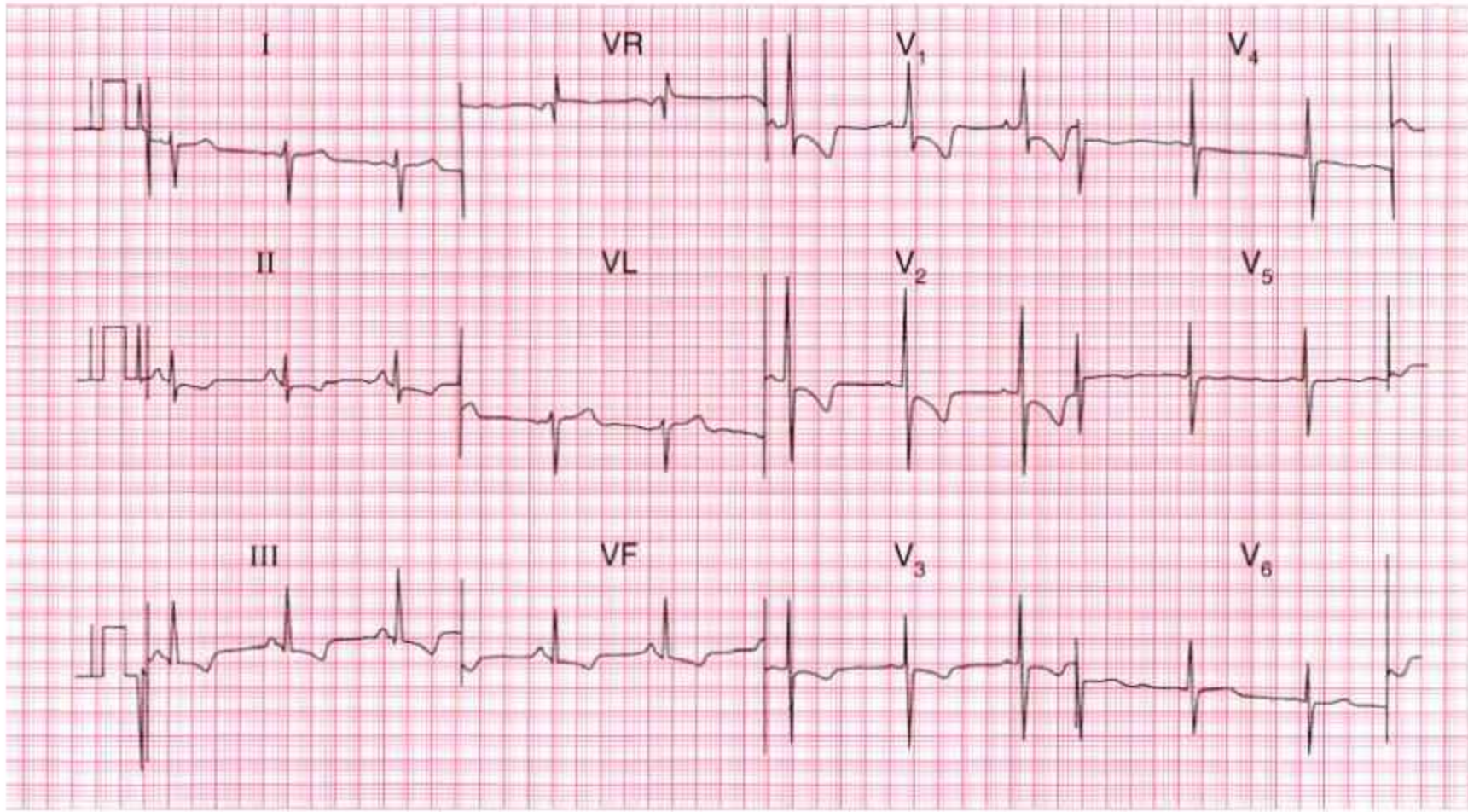
THIS ECG WAS RECORDED IN THE ED DEPARTMENT FROM A 55-YEAR-OLD MAN WHO HAD HAD CHEST PAIN AT REST FOR 6 H. THERE WERE NO ABNORMAL PHYSICAL FINDINGS. WHAT DOES THE TRACE SHOW, AND HOW WOULD YOU MANAGE HIM?



ANTROLATERAL ISCHEMIA

- The ECG shows:
- • Sinus rhythm
- • Normal axis
- • Normal QRS complexes
- • ST segment depression - horizontal in leads
- V3-V4, downward-sloping in leads I, VL, V5-V6

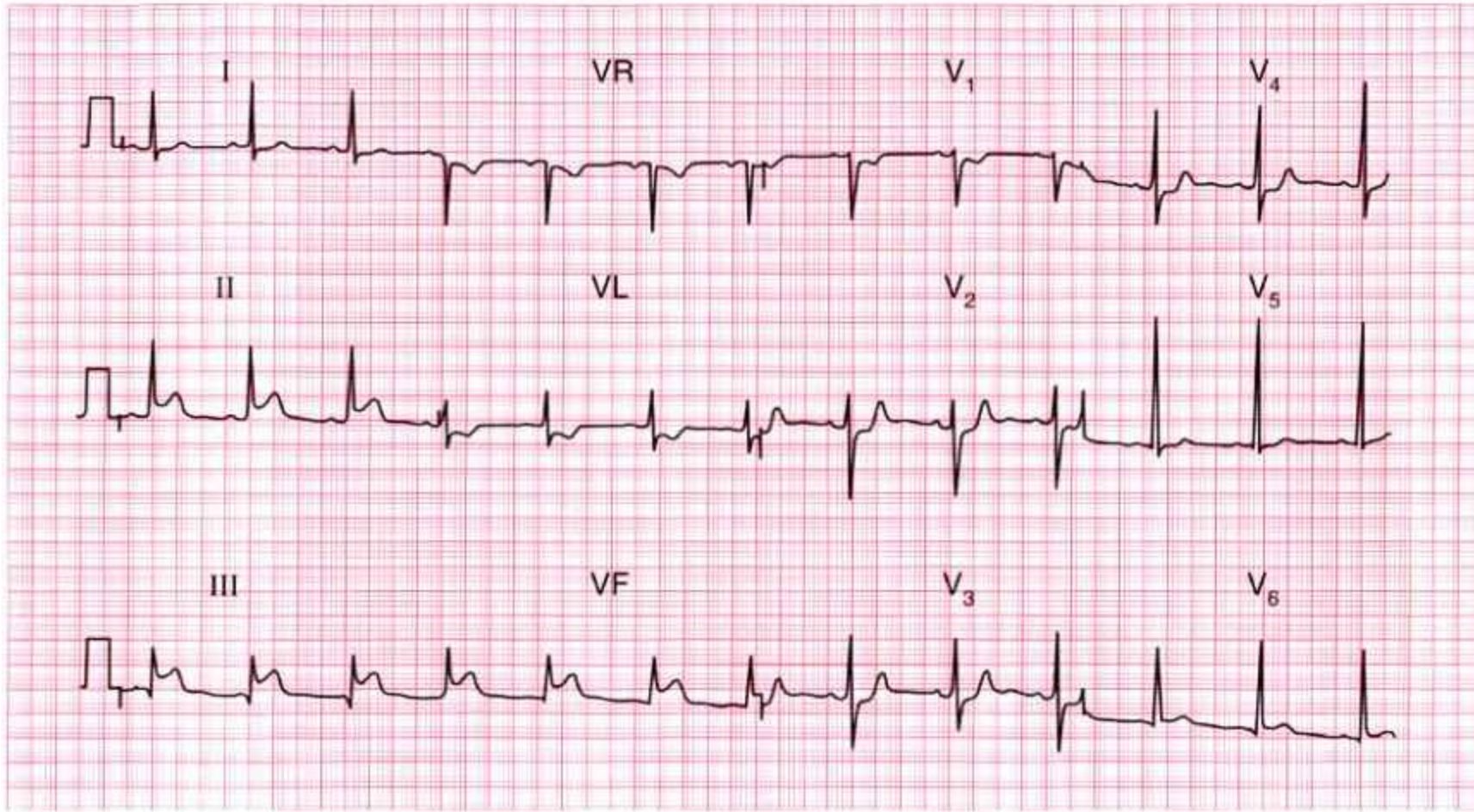
A 40-YEAR-OLD WOMAN IS REFERRED TO FAST TRACT BECAUSE OF INCREASING BREATHLESSNESS. WHAT DOES THIS ECG SHOW, WHAT PHYSICAL SIGNS MIGHT YOU EXPECT, AND WHAT MIGHT BE THE UNDERLYING PROBLEM? WHAT MIGHT DO YOU?



SEVER RIGHT VENTRICULAR HYPERTROPHY

- The ECG shows:
- • Sinus rhythm
- • Peaked P waves, best seen in lead II
- • Right axis deviation
- • Dominant R waves in lead V1
- • Deep S waves in lead V6
- • Inverted T waves in leads II, III, VF, V1-V3

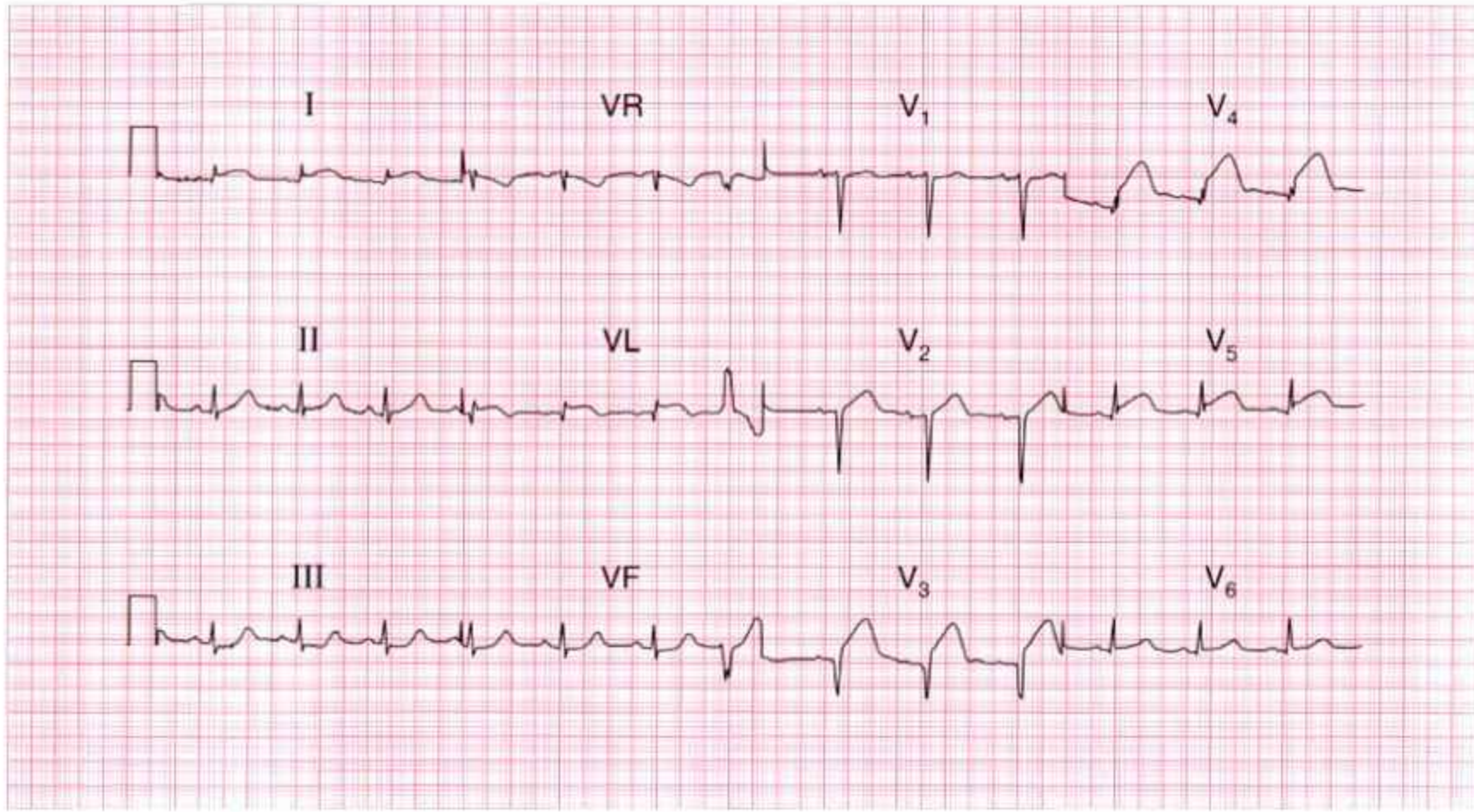
A 50-YEAR-OLD MAN IS ADMITTED TO HOSPITAL AS AN EMERGENCY, HAVING HAD CHEST PAIN CHARACTERISTIC OF A MI FOR 4 H. APART FROM THE FEATURES ASSOCIATED WITH PAIN THERE ARE NO ABNORMAL PHYSICAL FINDINGS. WHAT DOES THIS ECG SHOW AND WHAT WOULD YOU DO?



ACUTE INF WALL MI

- The ECG shows:
- • Sinus rhythm
- • Normal axis
- • Small Q waves in lead III but not elsewhere
- • Elevated ST segments in leads II, III, VF, with
- upright T waves
- • T wave inversion in lead VL
- • Suggestion of ST segment depression in leads
- V2-V3

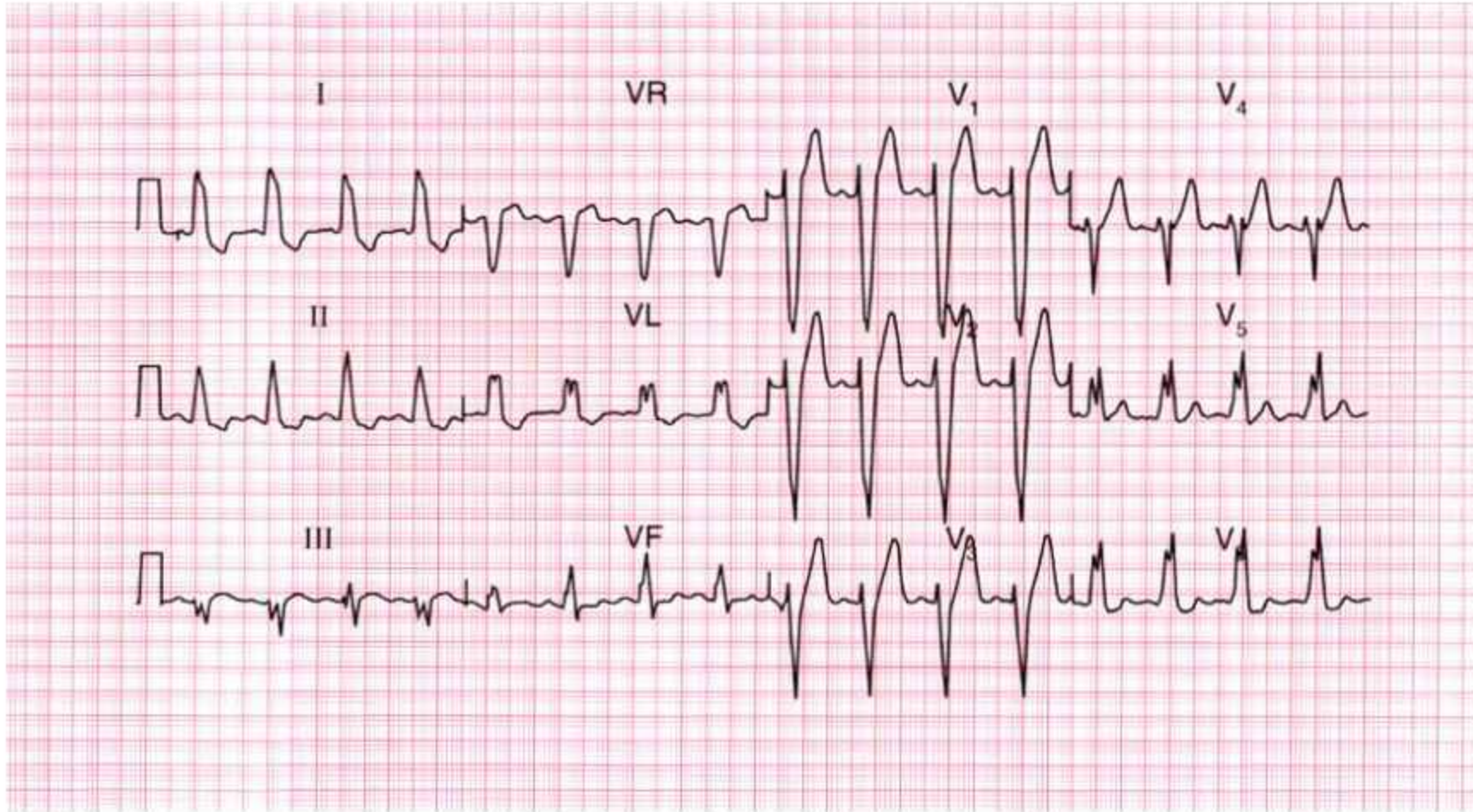
THIS ECG WAS RECORDED IN THE ED DEPARTMENT FROM A 60-YEAR-OLD MAN WHO HAD HAD SEVERE CENTRAL CHEST PAIN FOR 1 H. WHAT DOES IT SHOW AND WHAT WOULD YOU DO?



ACUTE ANTROLATERAL WALL MI

- The ECG shows:
- • Sinus rhythm
- • One ventricular extrasystole
- • Normal axis
- • Q waves in leads V2-V3; small Q waves in leads
- VL, V4
- • Raised ST segments in leads I, *VL,* V3-V5

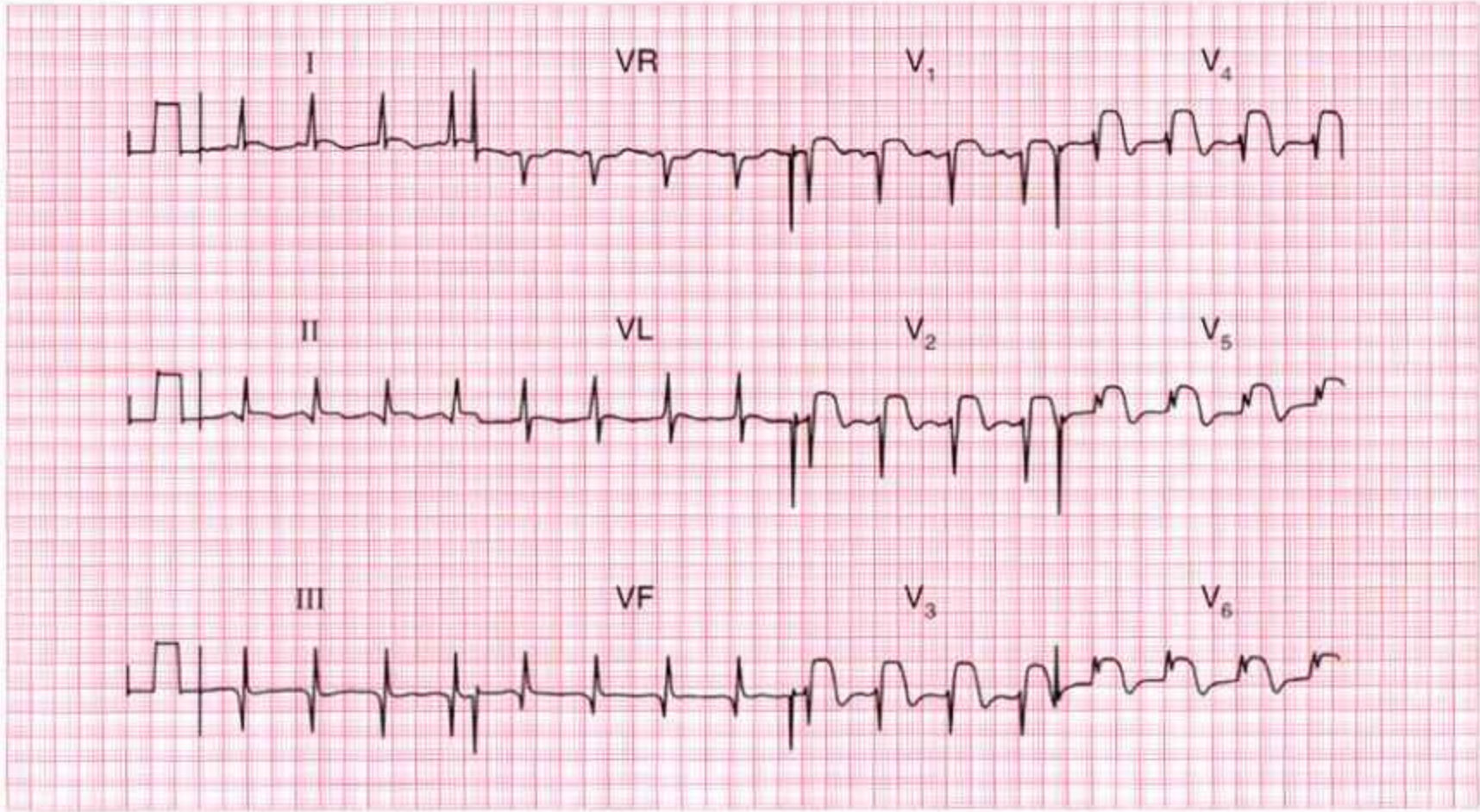
A 75-YEAR-OLD WOMAN COMPLAINING OF CENTRAL CHEST DISCOMFORT ON CLIMBING HILLS, TOGETHER WITH DIZZINESS; ON ONE OCCASION SHE HAD 'FAINTED' WHILE CLIMBING STAIRS. WHAT ABNORMALITY DOES THIS ECG SHOW AND WHAT PHYSICAL SIGNS WOULD YOU LOOK FOR?



LBBB

- The ECG shows:
- • Sinus rhythm
- • Broad QRS complexes (140 ms)
- • 'M' pattern in lead V6
- • Inverted T waves in leads I, VL

A 60-YEAR-OLD MAN, WHO 3 YEARS EARLIER HAD HAD A MYOCARDIAL INFARCTION FOLLOWED BY MILD ANGINA, WAS ADMITTED TO HOSPITAL WITH CENTRAL CHEST PAIN THAT HAD BEEN PRESENT FOR 1 H AND HAD NOT RESPONDED TO SUBLINGUAL NITRATES. WHAT DOES HIS ECG SHOW, AND WHAT WOULD YOU DO?



OLD INFERIOR AND ACUTE ANTERIOR MYOCARDIAL INFARCTIONS

- The ECG shows:
- • Sinus rhythm
- • Normal axis
- • Q waves in leads II, III, VF
- • Normal QRS complexes in the anterior leads
- • Marked ST segment elevation in leads V1-V6