

ECG ANALYSIS OF ARRHYTHMIAS I.

(SUPRAVENTRICULAR DISTURBANCES OF IMPULSE FORMATION)

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General considerations

- P wave, PP distance, P wave and QRS complex, QRS morphology
- QRS axis, axis deviations
- leads II-III, aVR, aVF, V1-V2 are particularly important
- retrograde atrial activation results in negative P wave in II-III-aVF leads and in positive P wave in V1 (P')

Supraventricular (SV) disturbances of impulse formation



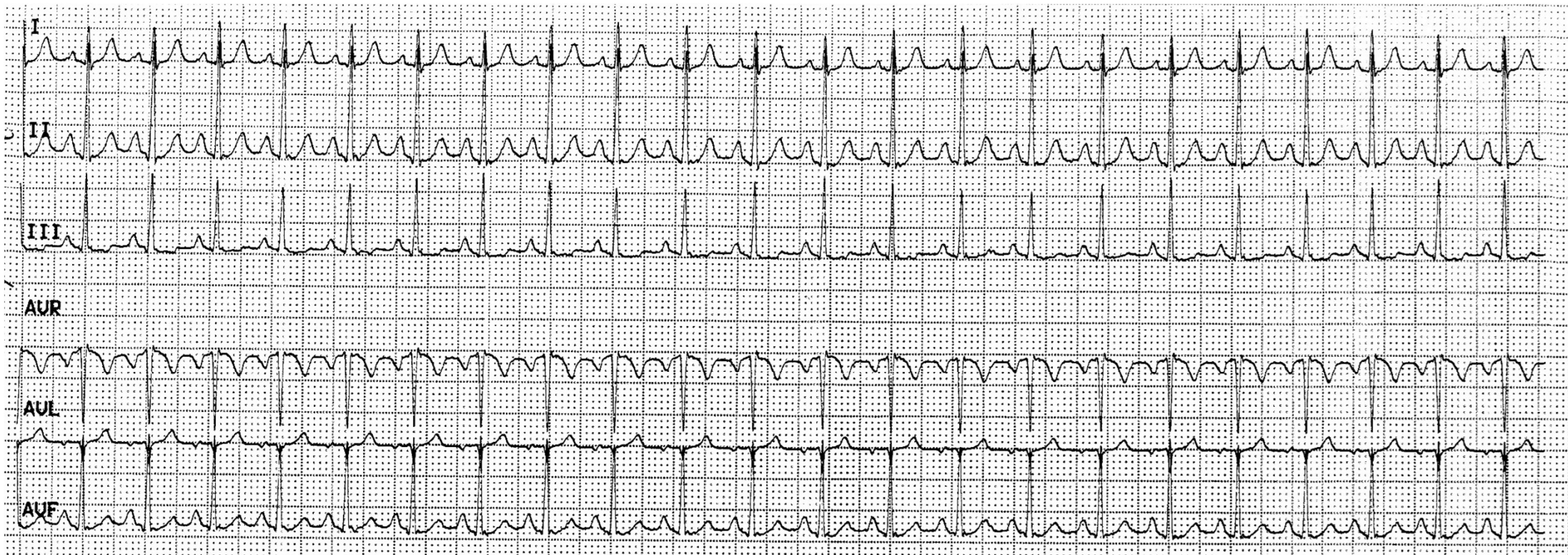
Nomotopic SV disturbances

Heterotopic SV disturbances



- 1. Sinus tachycardia (frequency: 100-180/min.)**
- 2. Sinus bradycardia (frequency: < 60/min. (<50/min.))**
- 3. Sinus node reentry tachycardia**
- 4. Wandering atrial pacemaker**
- 5. Sinus arrhythmia**
- 6. Sick sinus syndrome**

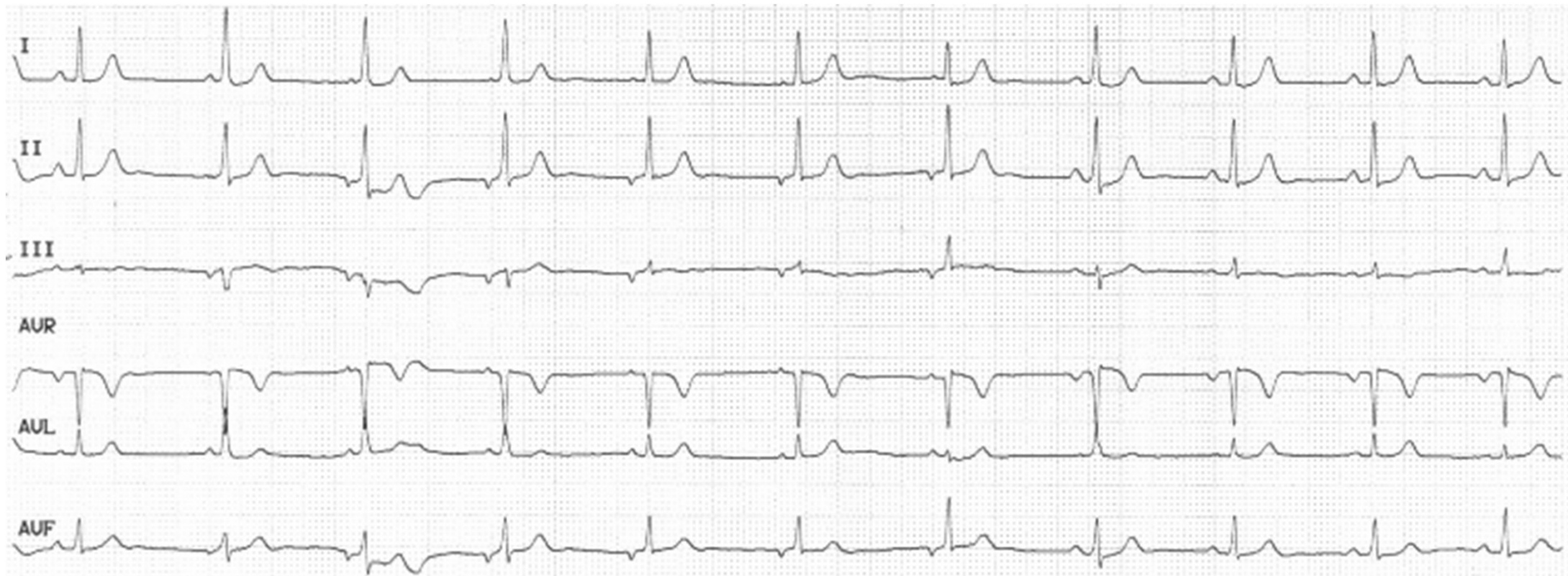
Sinus tachycardia



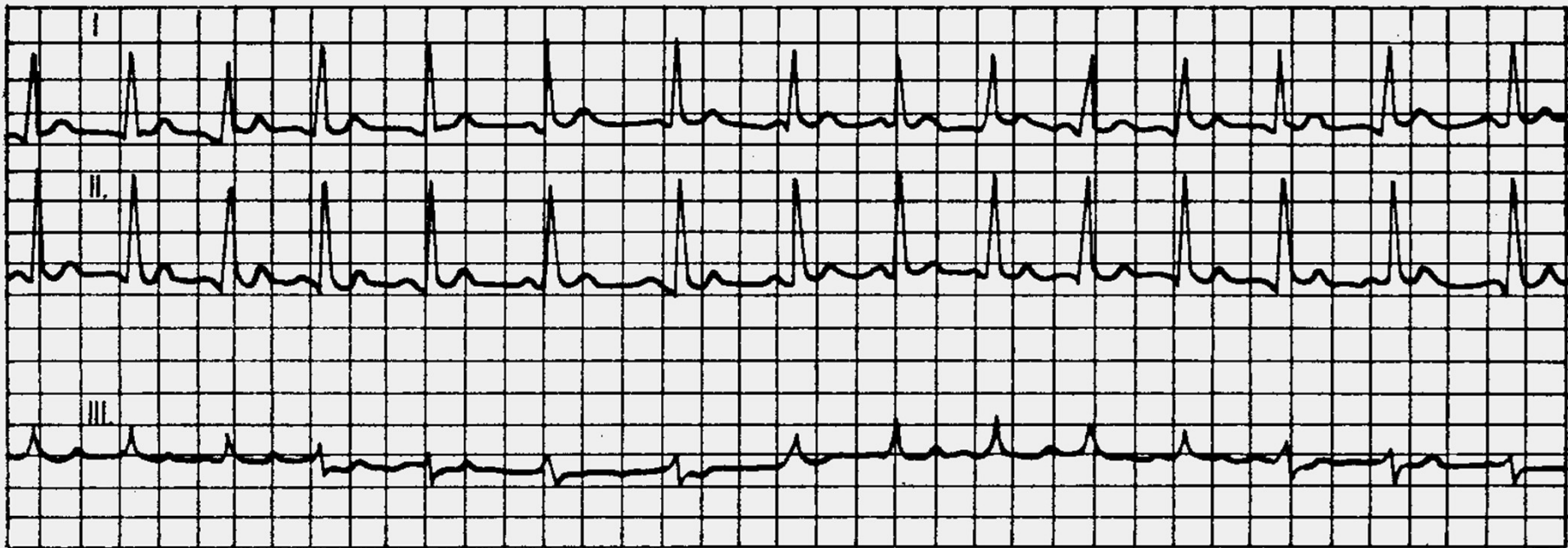
Sinus bradycardia



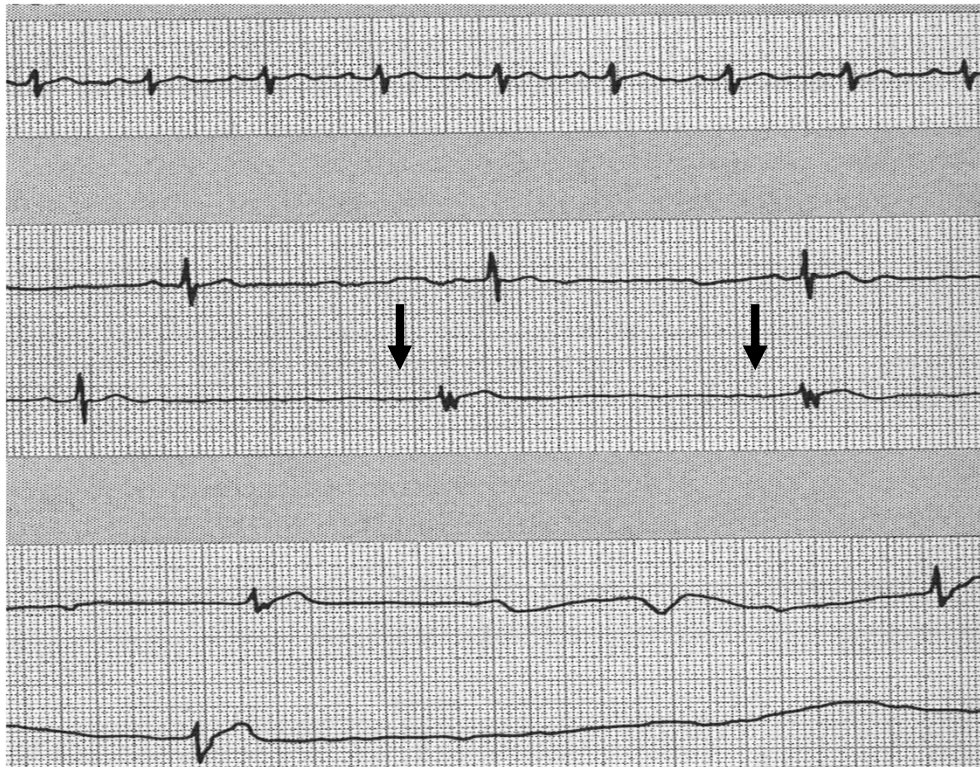
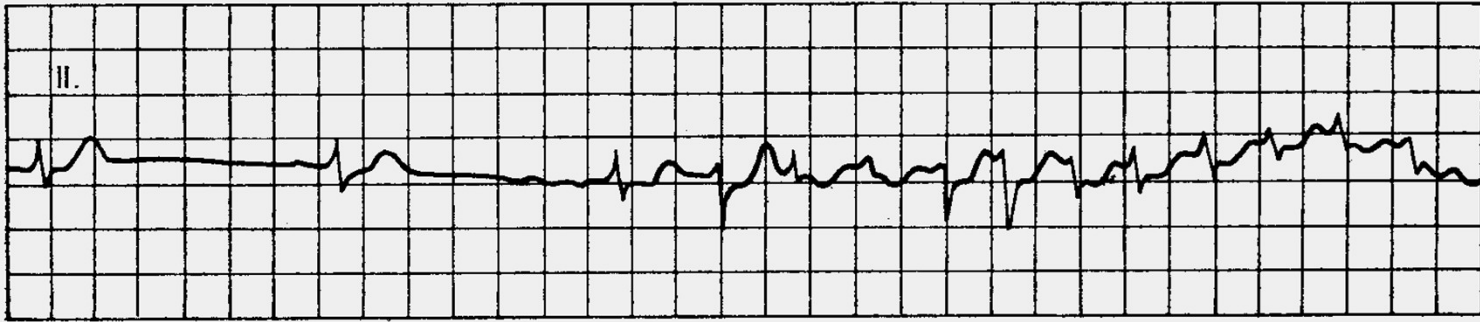
Wandering atrial pacemaker



Respiratory sinus arrhythmia



Sick-sinus syndrome



sinus arrest

Heterotopic SV disturbances of impulse formation

Active heterotopies

Passive heterotopies

**Premature contraction (PC)
(Extra systole (ES))**

Tachyarrhythmias

1. Atrial PC

2. Junctional PC

1. Ectopic atrial tachycardia

2. Intraatrial reentry tachycardia

3. Multifocal atrial tachycardia

4. Atrial flutter

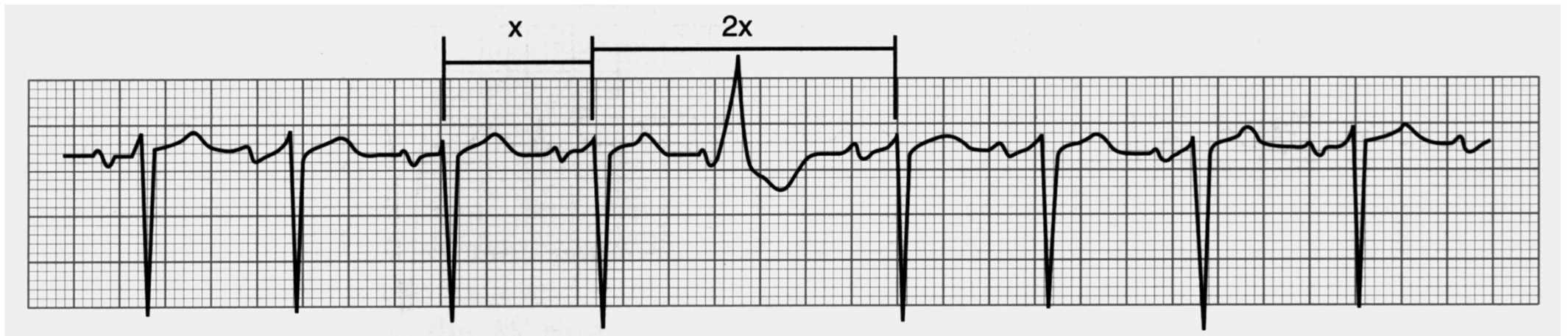
5. Atrial fibrillation

6. AV-node reentry tachycardia

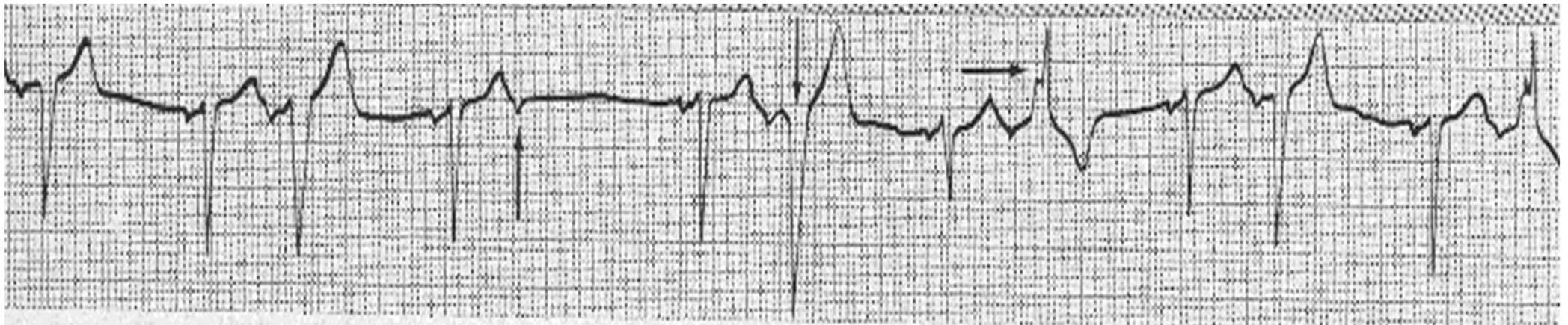
**7. Accelerated junctional rhythm and
Junctional tachycardia**

Premature contraction (PC) and related terms

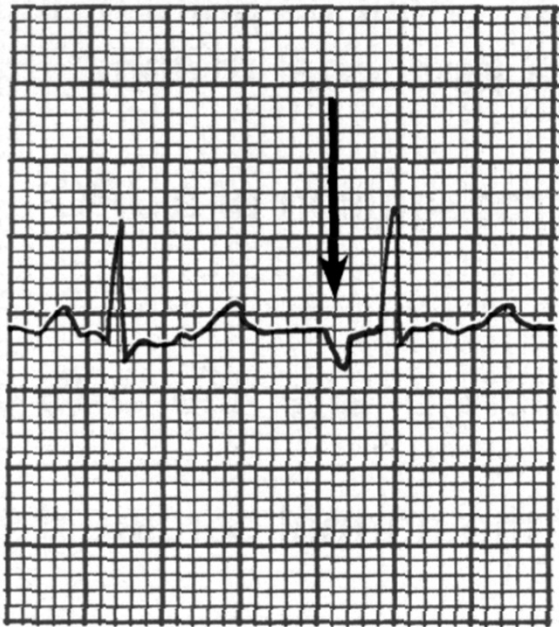
compensated PC



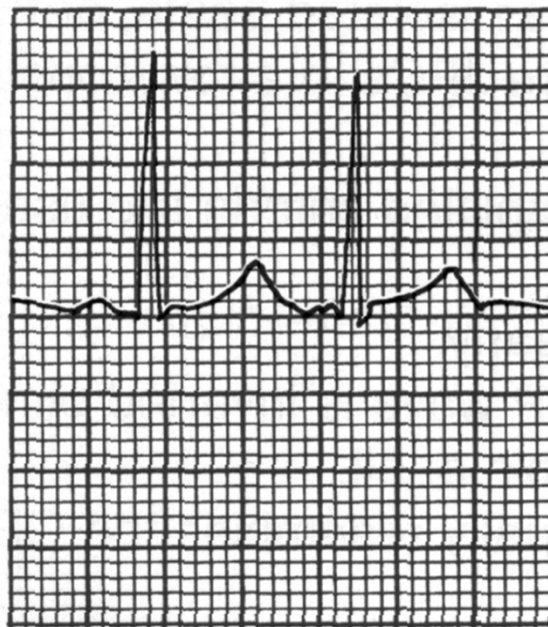
Atrial premature contractions



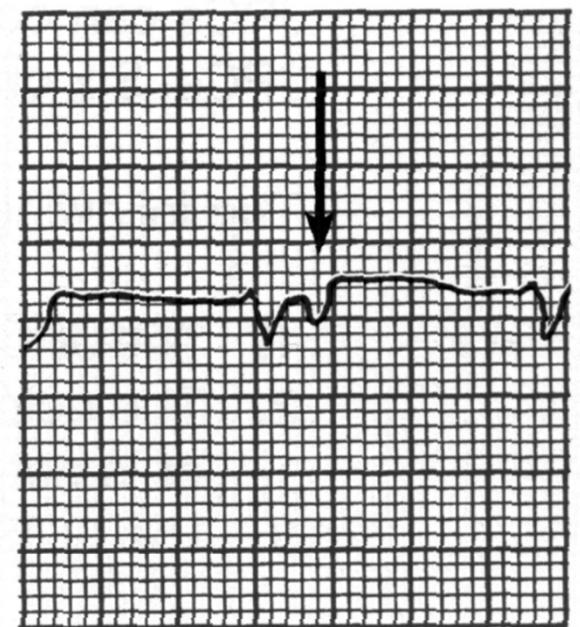
Junctional premature contractions



JPC with inverted P wave preceding QRS

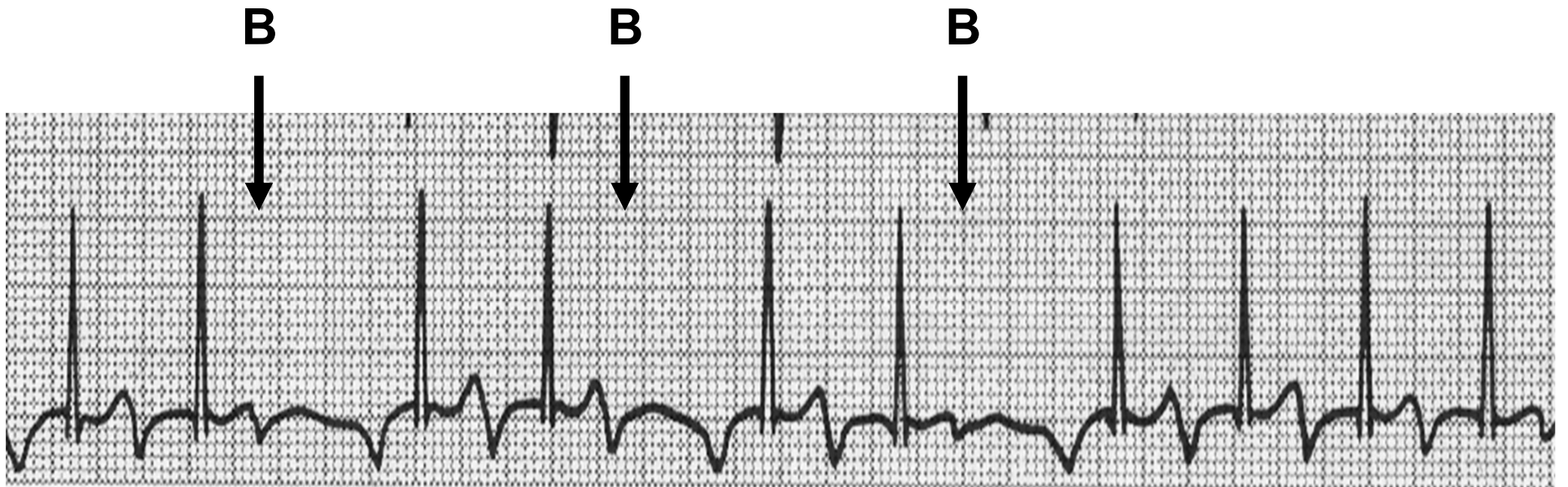


JPC with no P wave visible



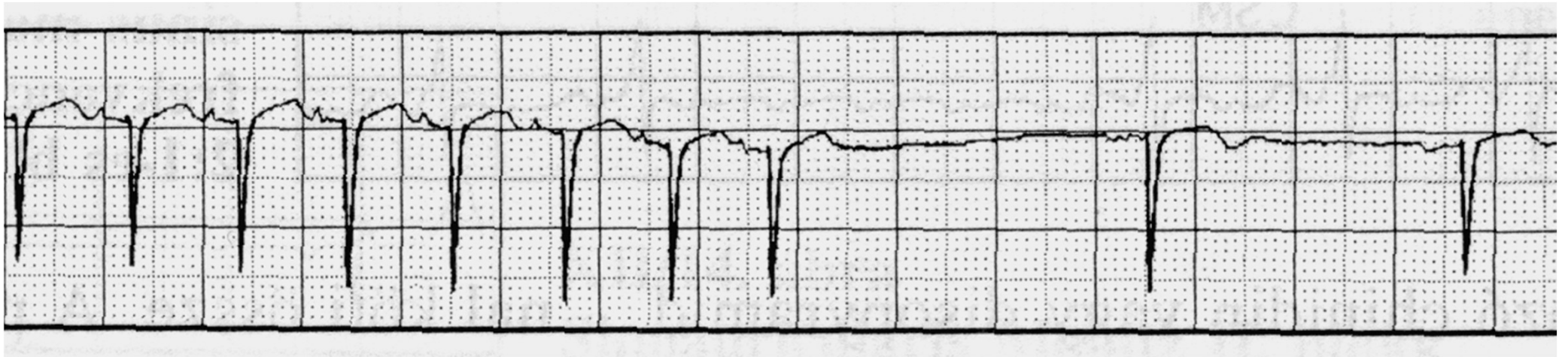
JPC with inverted P wave following QRS

Ectopic atrial tachycardia

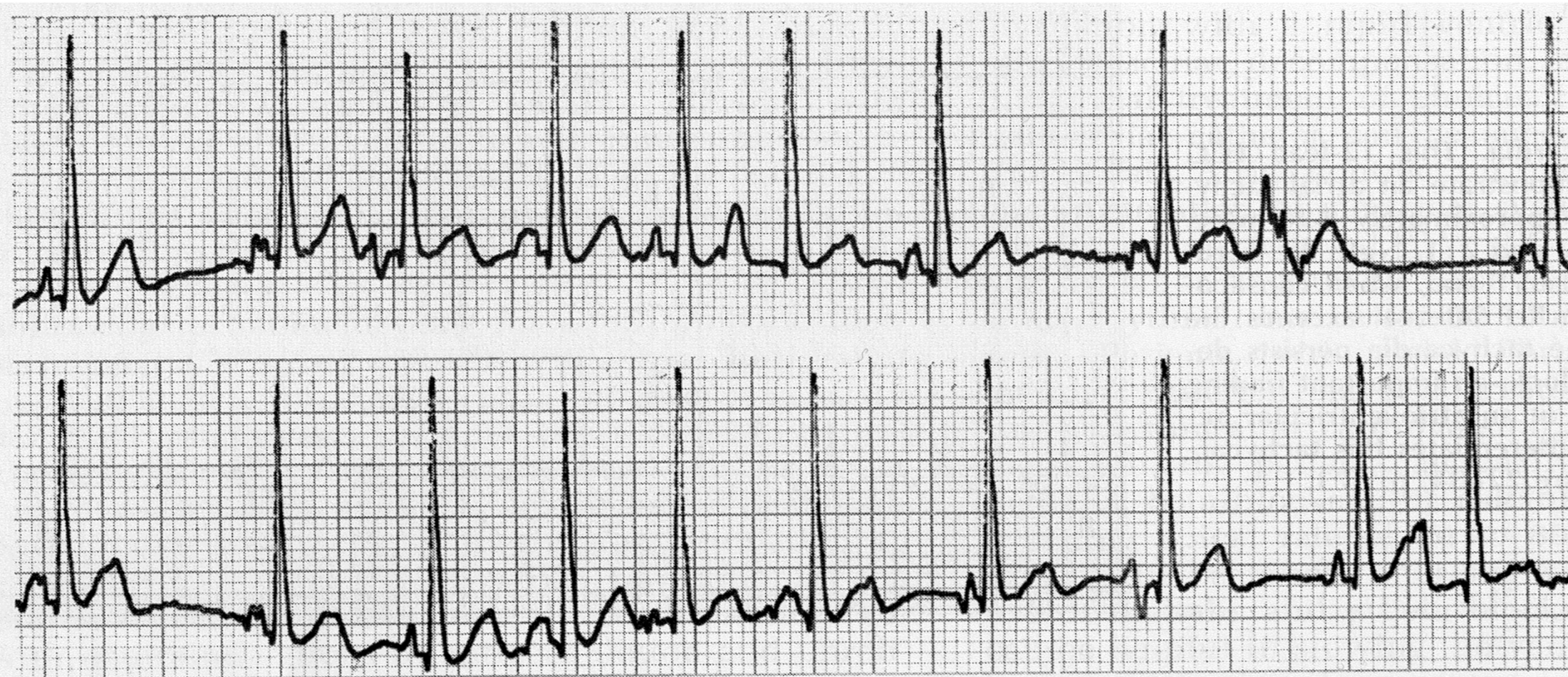


aVF lead

Atrial reentry tachycardia

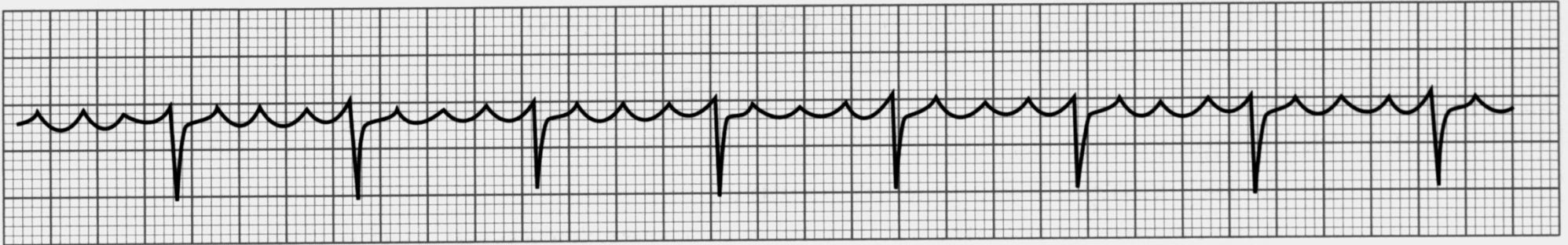


Multifocal atrial tachycardia



Atrial flutter

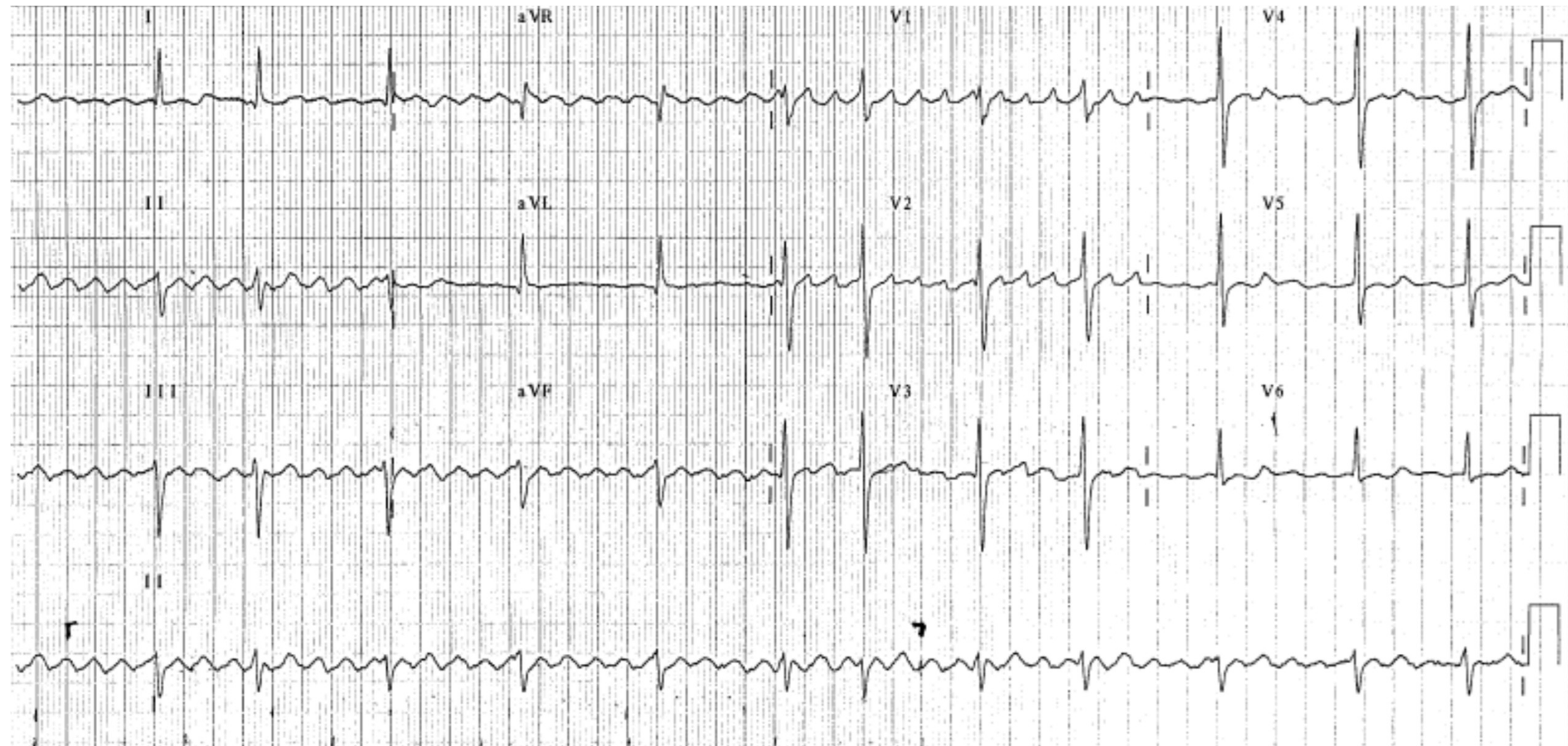
Lead V₁— atrial flutter and 4:1 block



Lead II—atrial flutter with alternating 2:1 and 4:1 block

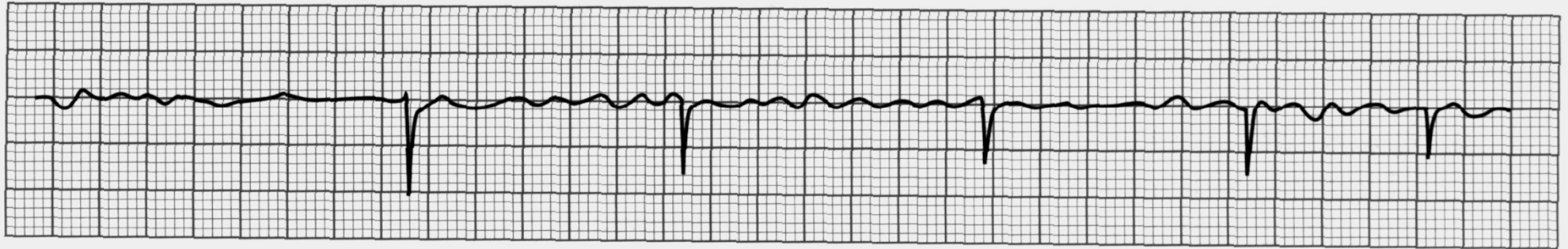


Atrial flutter with alternating 2:1 and 4:1 block

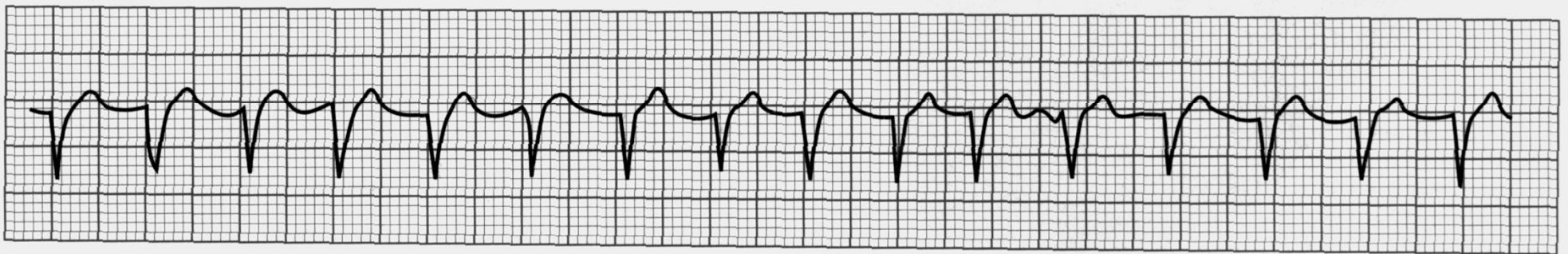


Atrial fibrillation

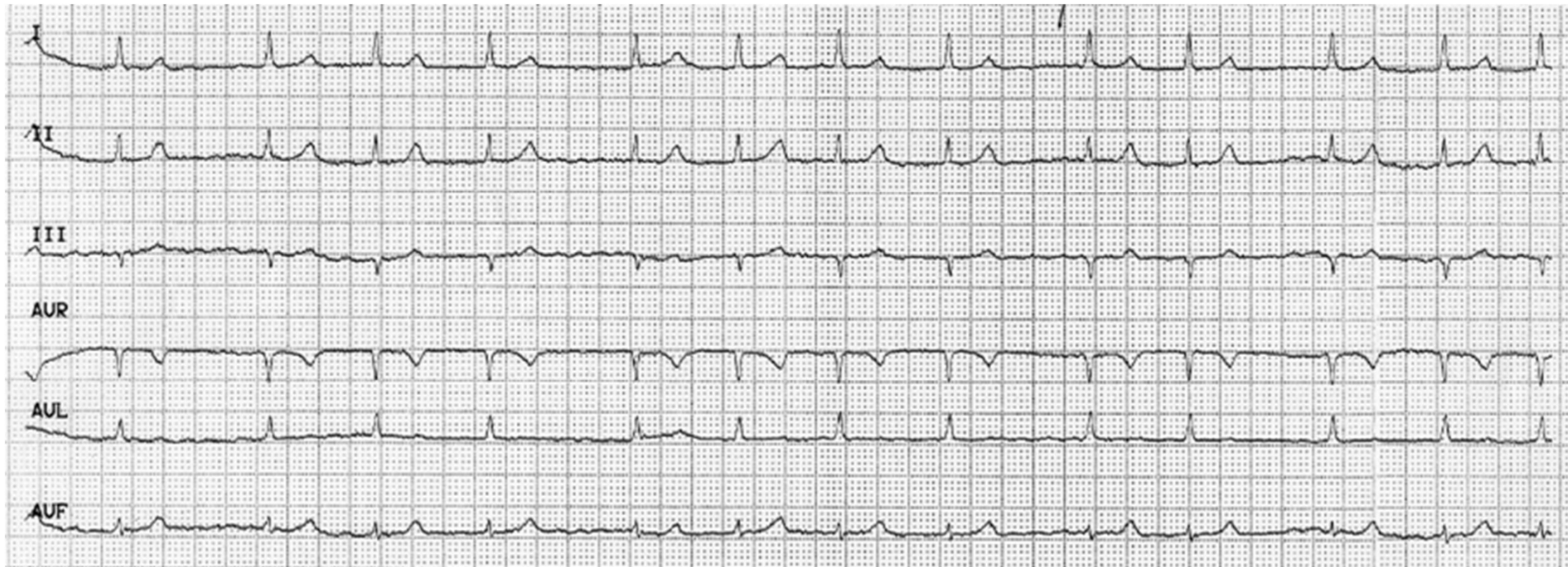
Lead V₁—atrial fibrillation with slow ventricular response



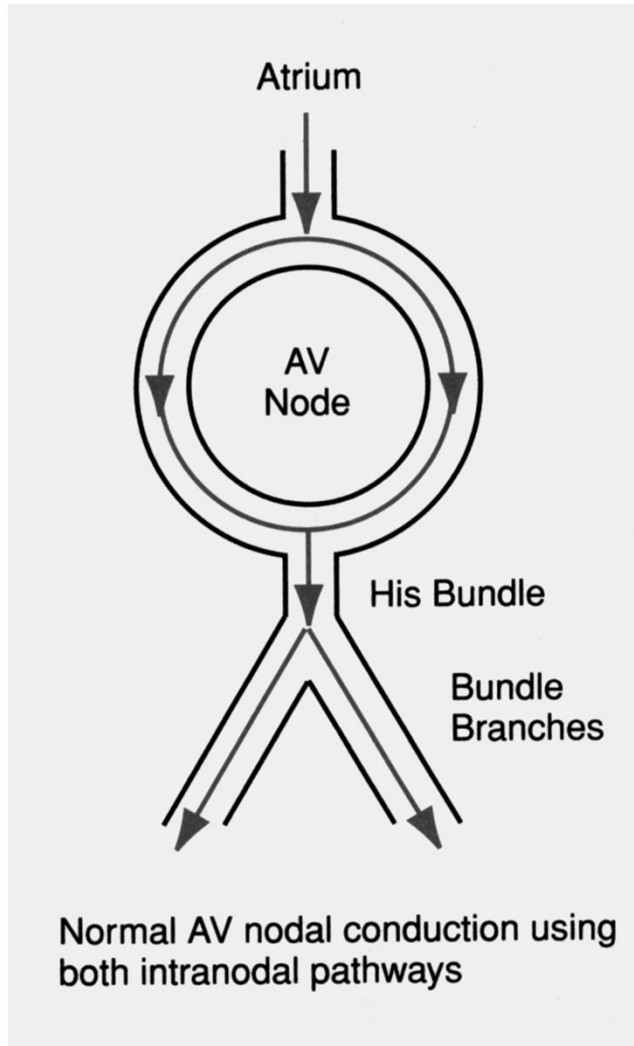
Lead V₁—atrial fibrillation with rapid ventricular response



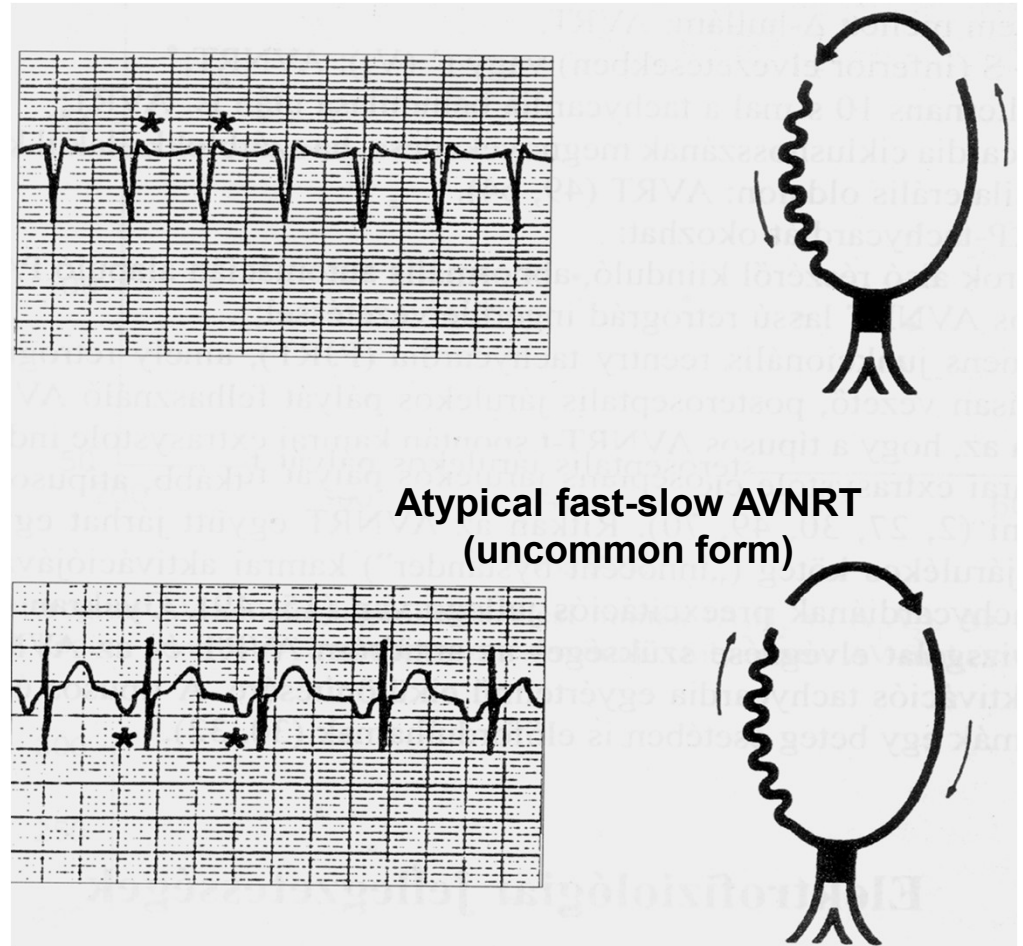
Atrial fibrillation



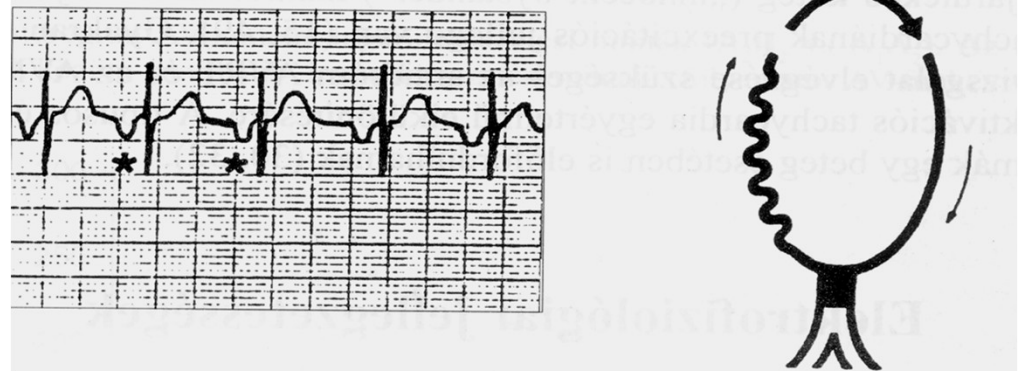
AV-nodal reentry tachycardia (AVNRT)



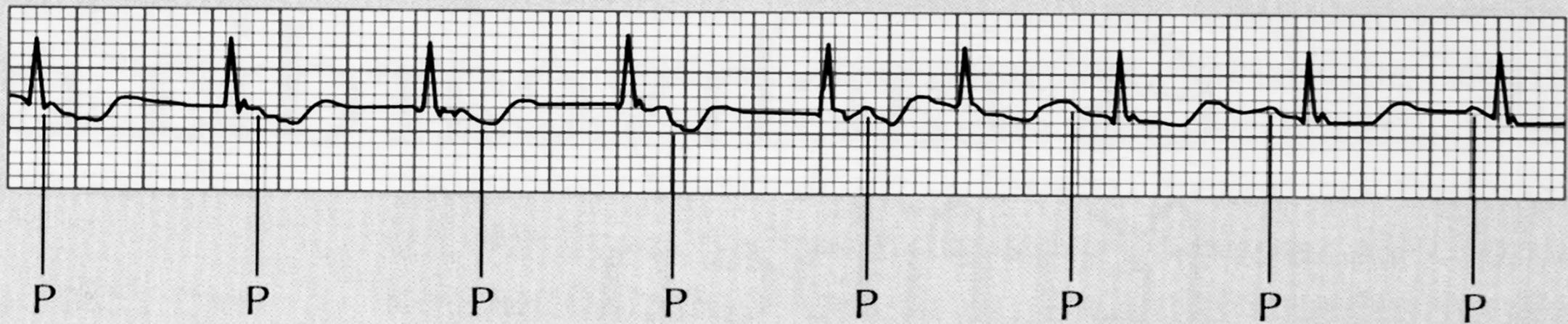
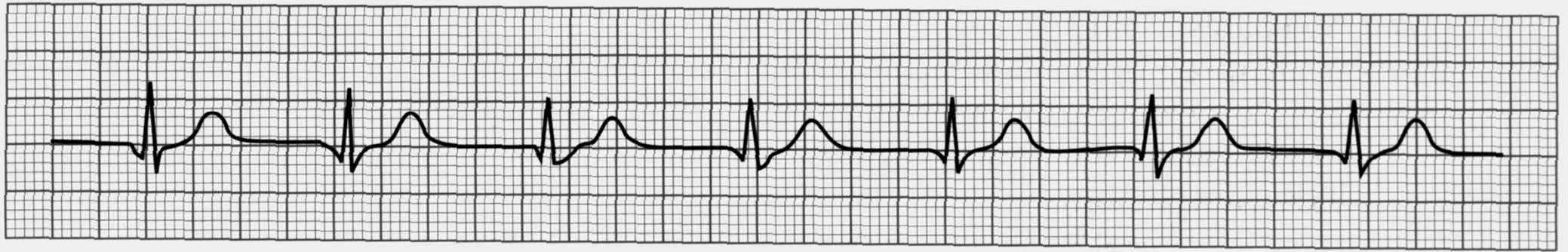
Typical slow-fast AVNRT (common form)



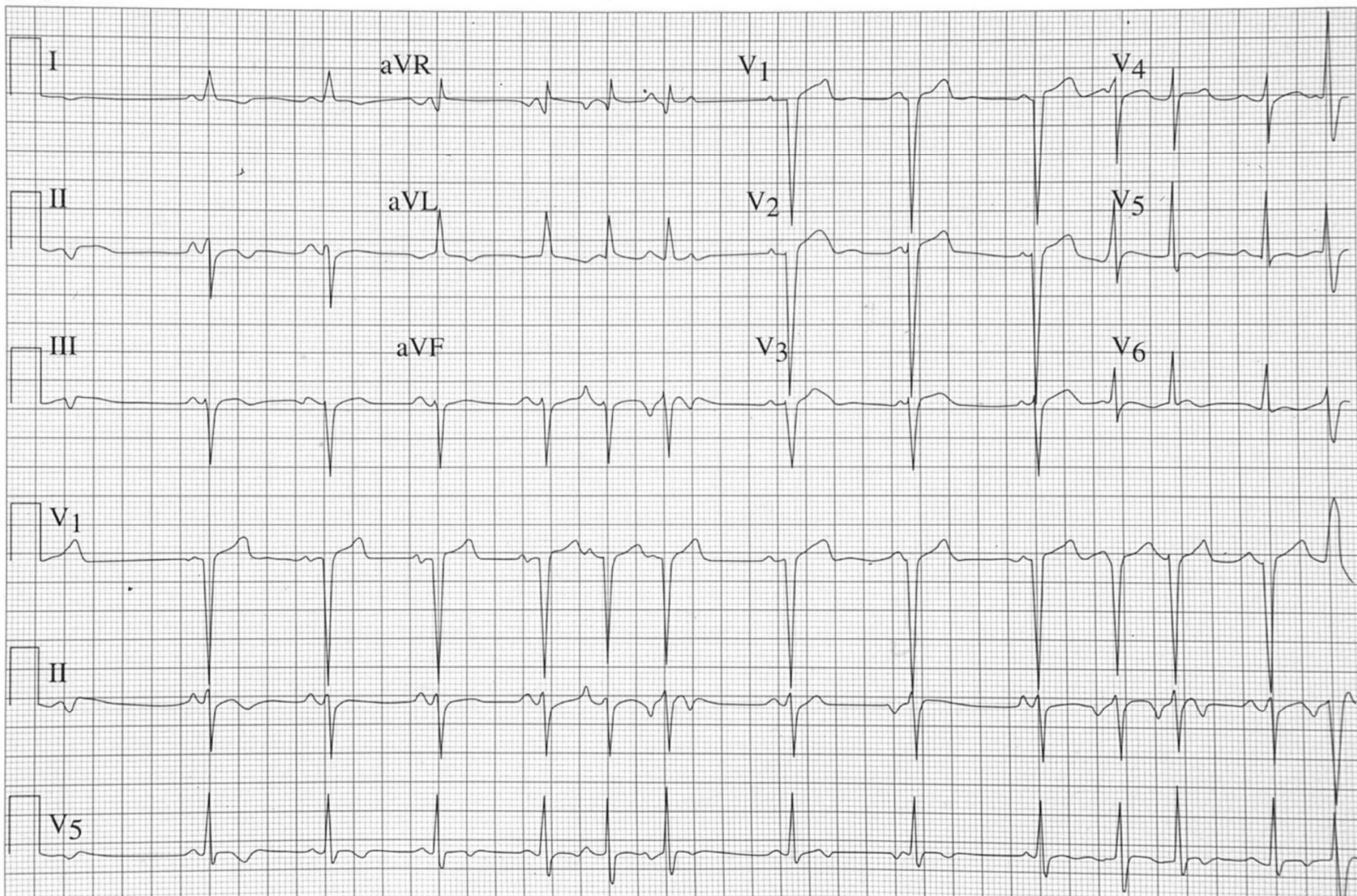
Atypical fast-slow AVNRT (uncommon form)



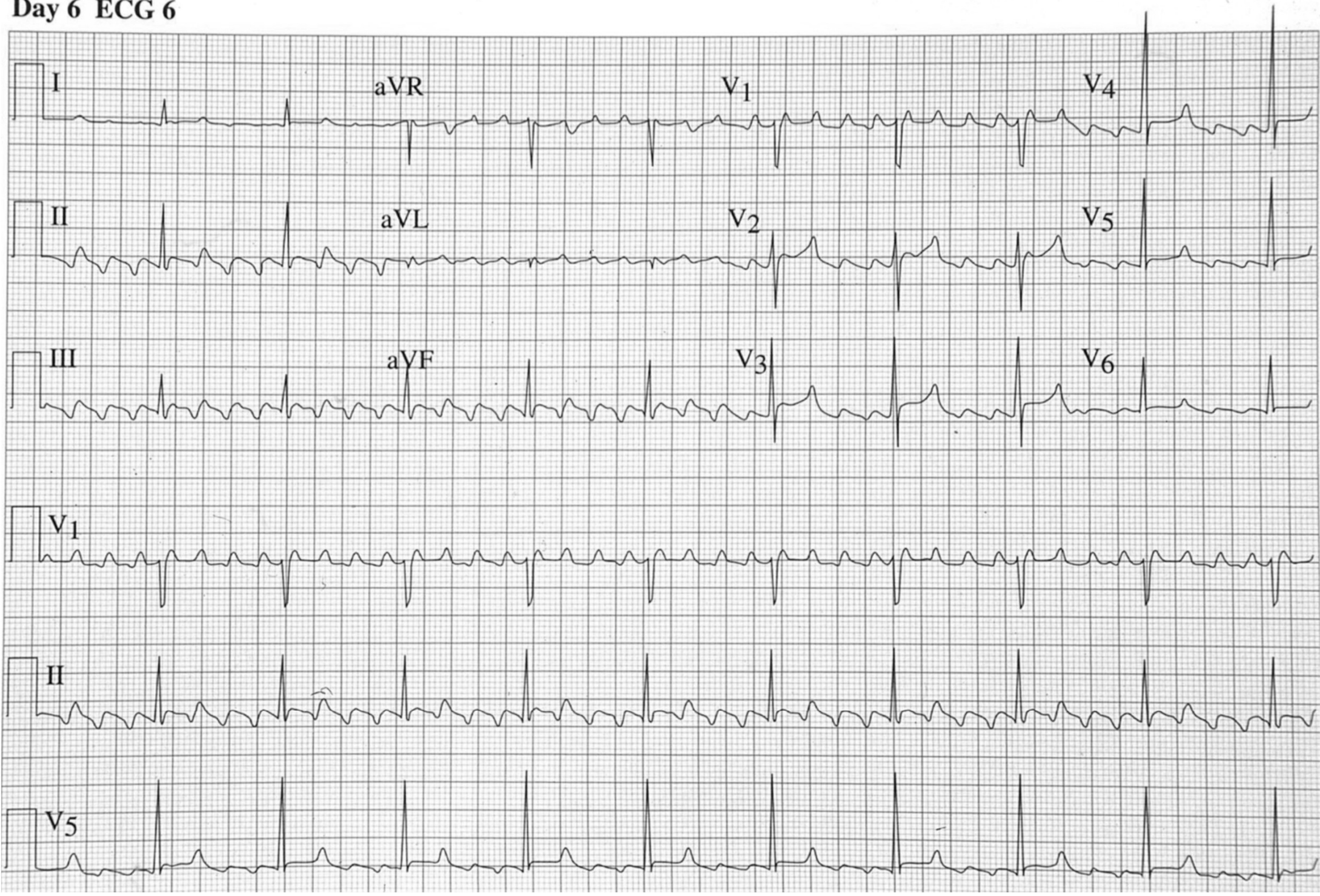
Accelerated junctional rhythm and junctional tachycardia



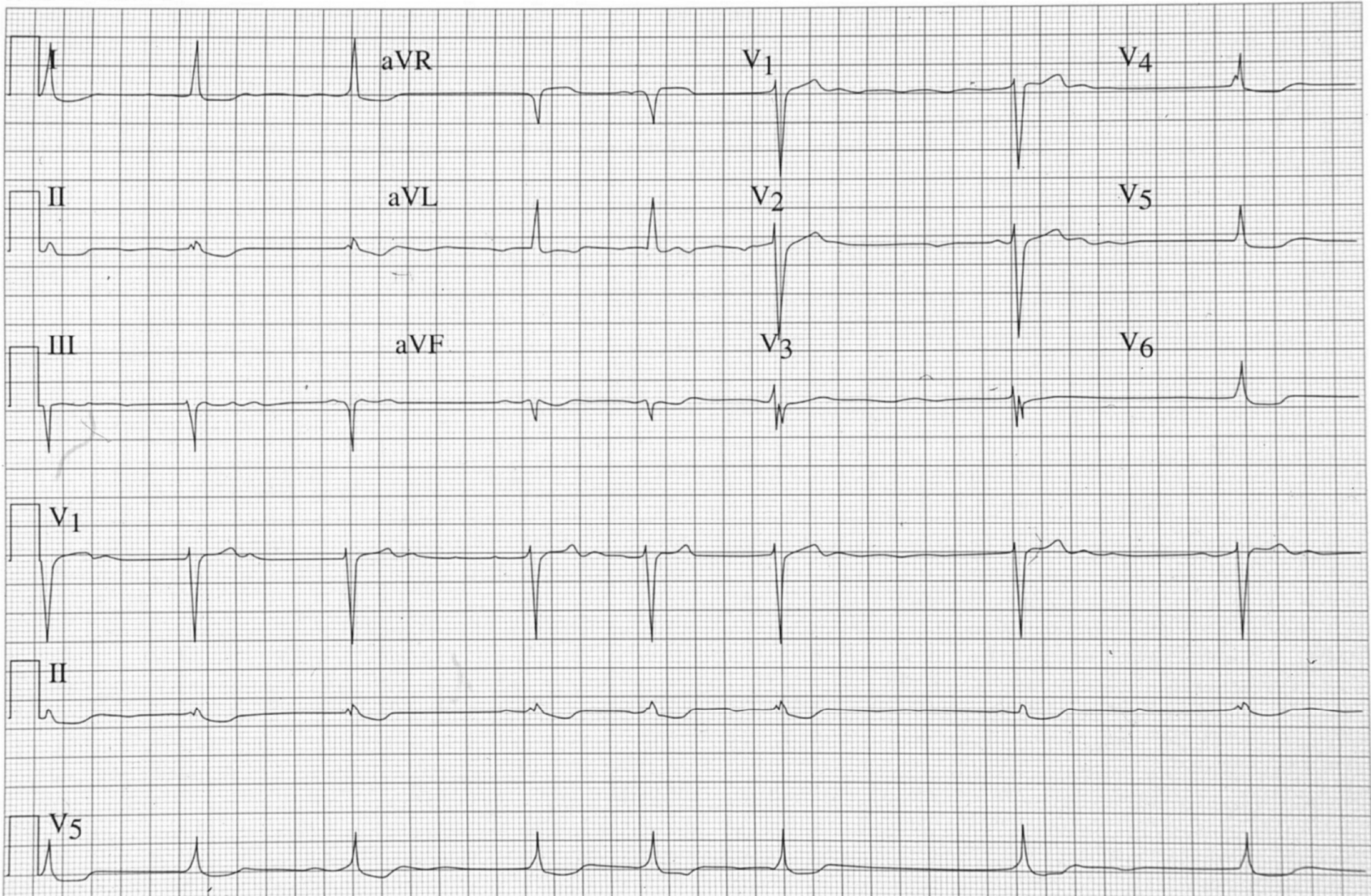
Day 6 ECG 14



Day 6 ECG 6



Day 6 ECG 17



Day 6 ECG 20

