

CARDIO  NETWORKS.ORG

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## Ischemie & Quiz



**ISCHEMIE**



# Diagnose infarct

Diagnostische criteria voor myocardinfarct:

-Hartenzymen verhoogd &

-1 van de volgende:

-Typische klachten van drukkende snoerende pijn op de borst, eventueel met uistraling naar de kaak en/of arm en vegetatieve verschijnselen.

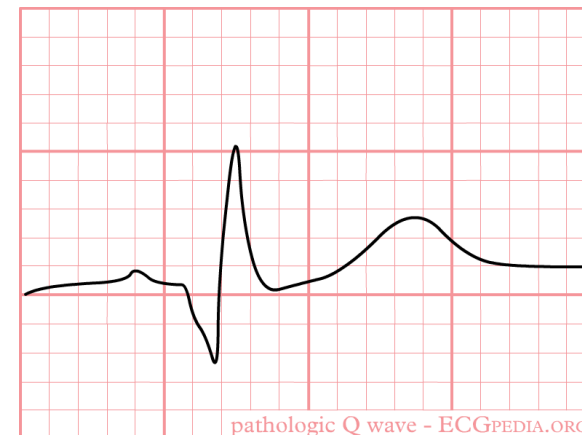
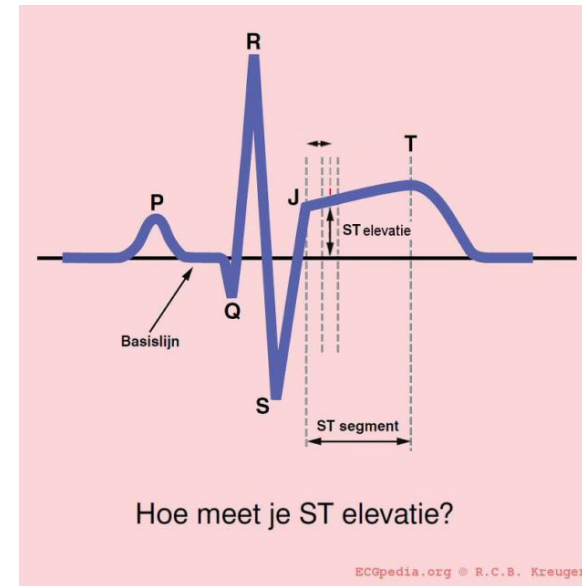
-ST elevatie of depressie

-Nieuwe pathologische Q

-(na coronaire interventie)

Dus: ECG is ondergeschikt aan enzymen!

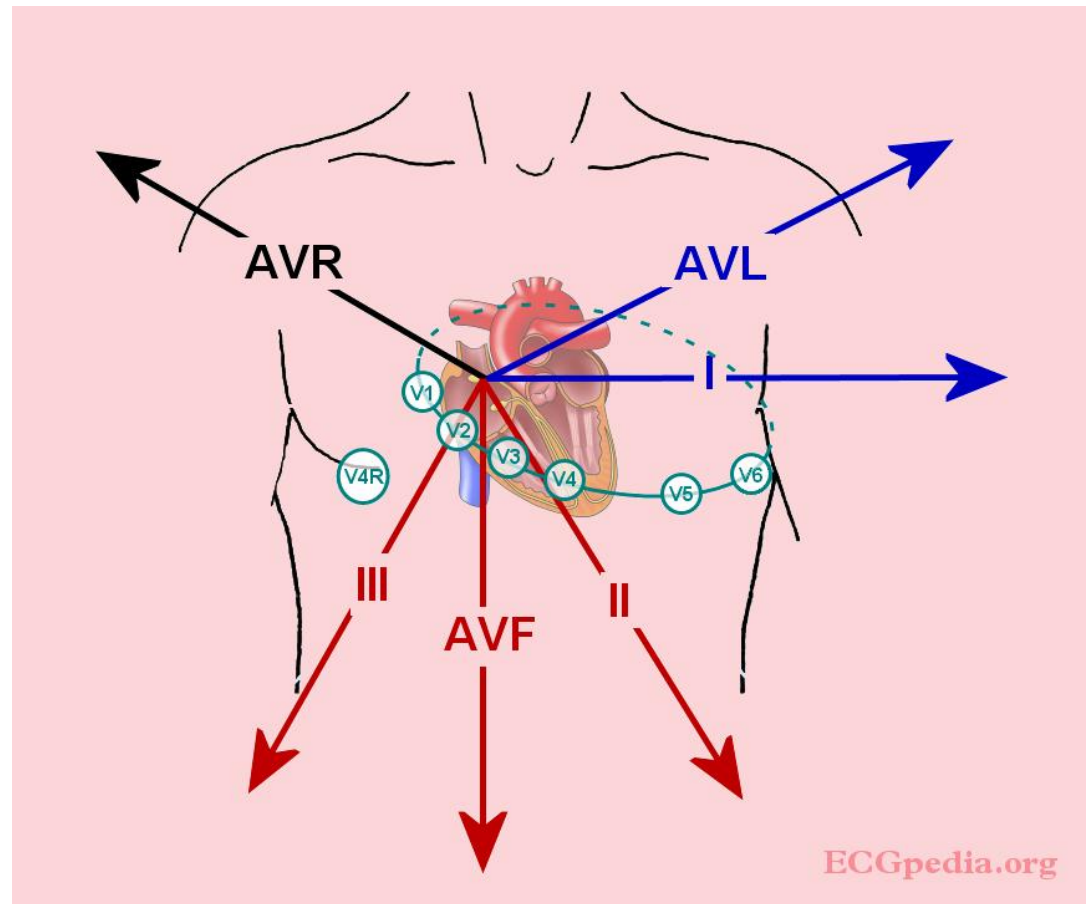
Maar wel essentieel in de acute fase!



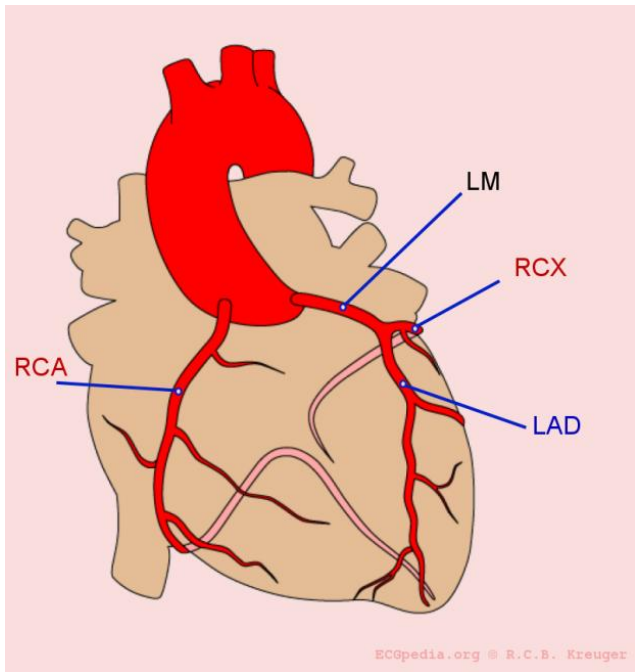
## Significante ST elevatie

Extremiteiten: > 1 mm in 2  
belendende afleidingen

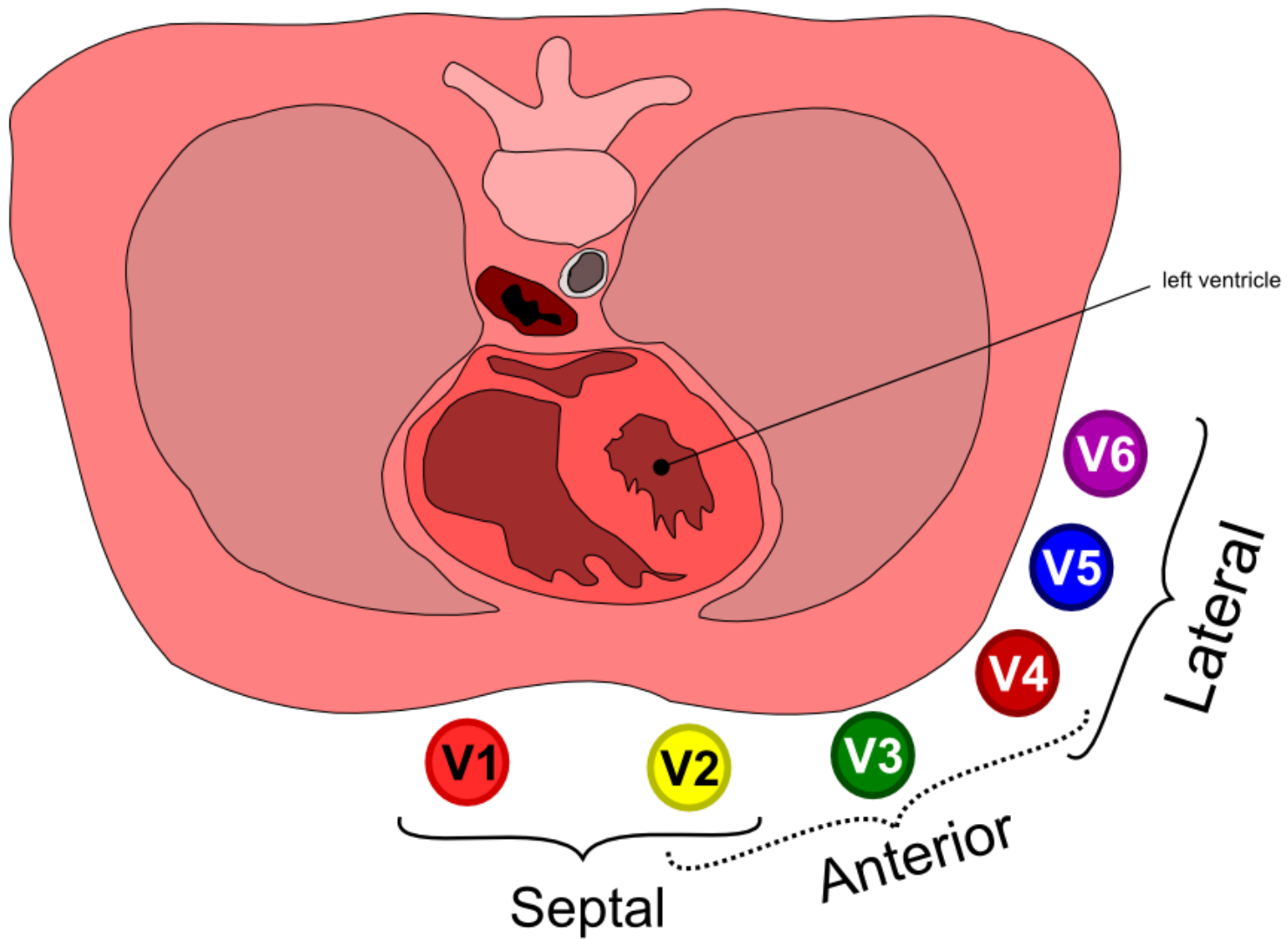
Voorwand: > 2 mm in 2  
belendende afleidingen

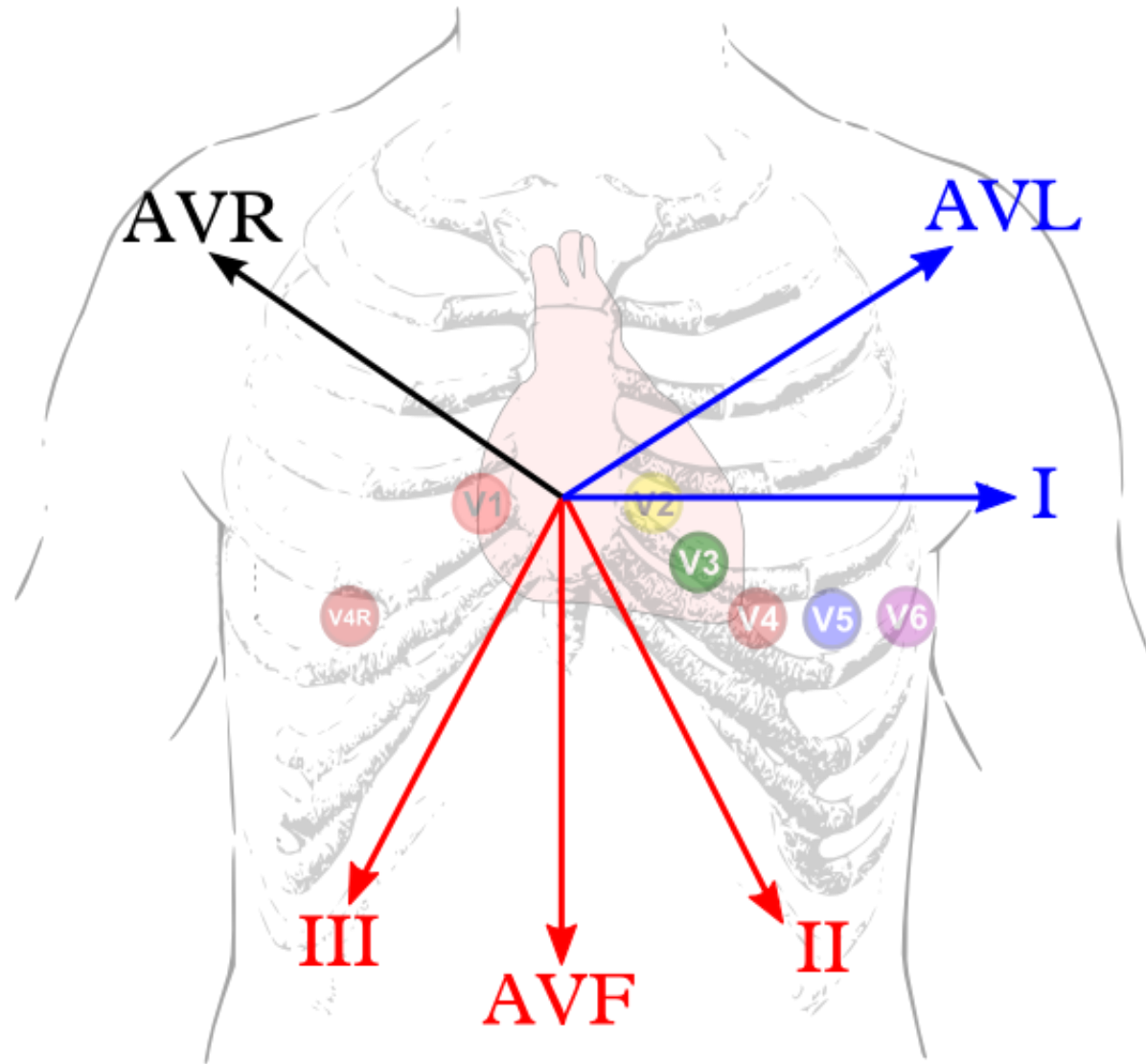


## De ST elevatie wijst het infarctgebied aan



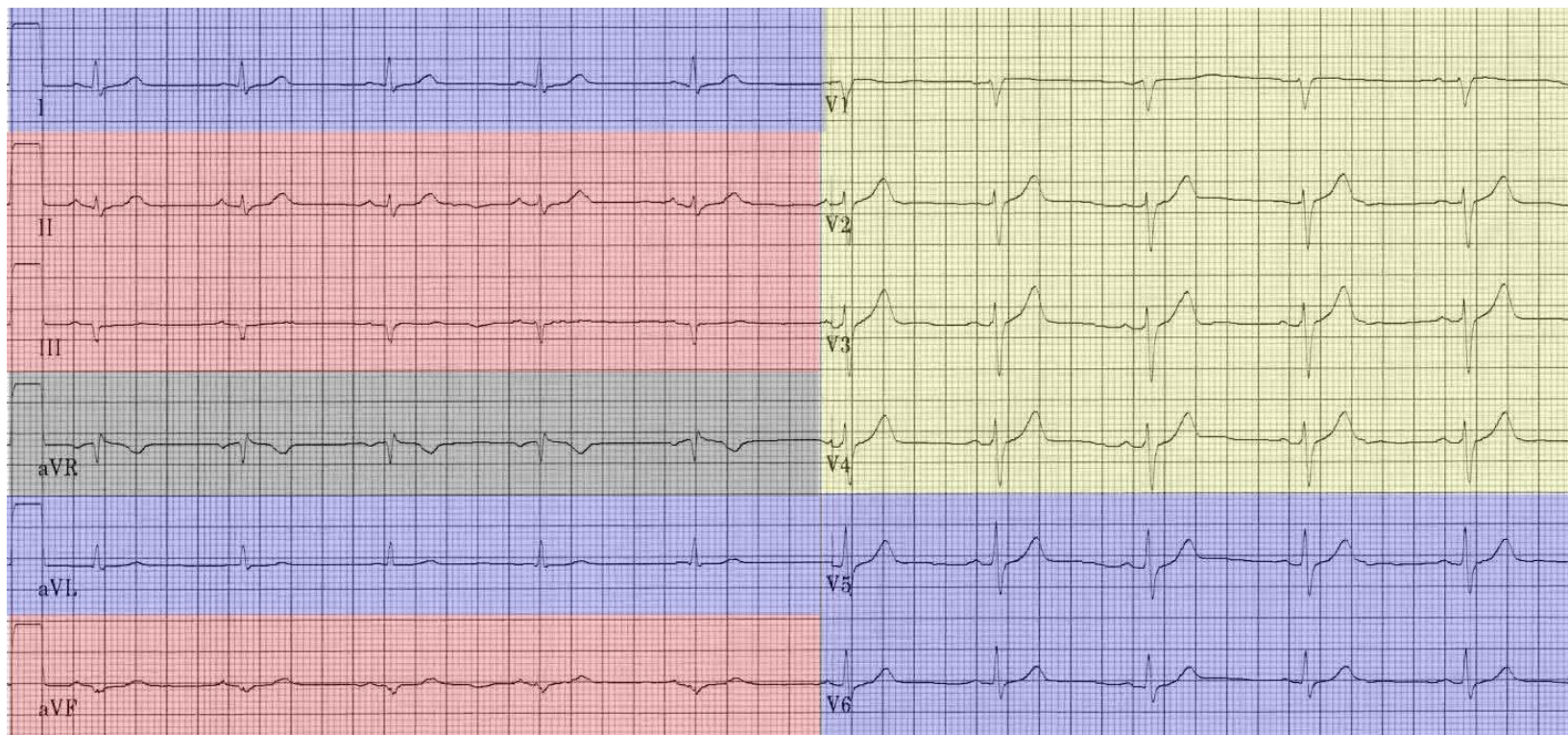
- **Voorwand:** V1-V4. Stroomgebied: LAD. *vaak tachycard.*
- **Onderwand:** II, III, AVF. Stroomgebied: 80% RCA (bradycard, elevatie III>II; depressie I en / of AVL), anders RCX (in 20%).
- **Rechter ventrikelfinfarct:** ST↑ in V4R. *vullen indien hypotensief*
- **Posterior:** hoge R en ST-depressie in V1-V3
- **Lateraal:** elevatie in I, AVL, V6. Stroomgebied: LAD (D-tak)
- **Hoofdstamocclusie:** diffuse ST depressie met ST elevatie in AVR. *Zeer hoog risico*





I Lateral	V1 Septal
II Inferior	V2 Septal
III Inferior	V3 Anterior
aVR Left Main	V4 Anterior
aVL Lateral	V5 Lateral
aVF Inferior	V6 Lateral



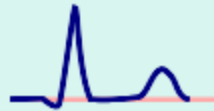


## ECG uitingen van ischemie

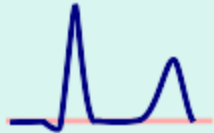
- ST elevatie
- ST depressie
- T top inversie
- QRS verbreding
- Asdraai
- R top afname
- Q vorming
- QTc verlenging

# ECG evolution in non-reperfused myocardial infarction

Normal



Peaked T wave



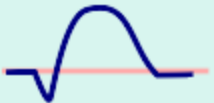
minutes

Progression of  
ST segment elevation



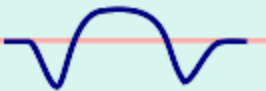
minutes - hours

Loss of R wave,  
Q wave formation



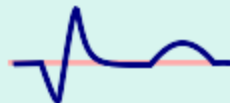
hours - days

T wave inversion



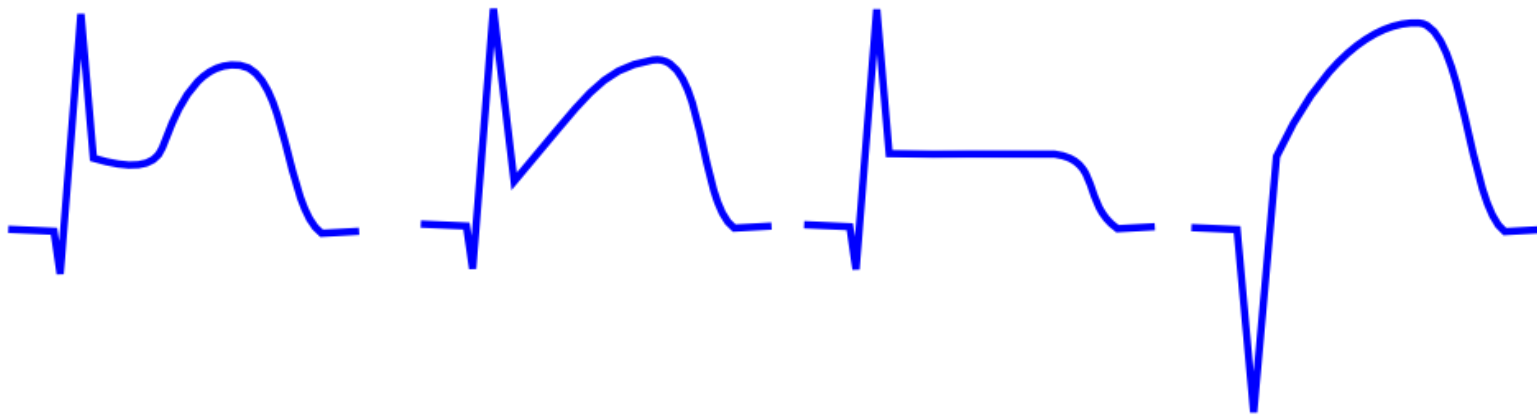
days

T wave normalisation  
persisting Q wave



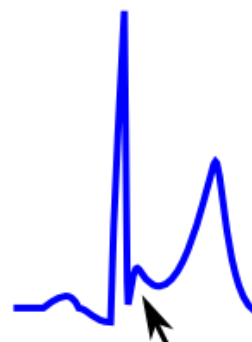
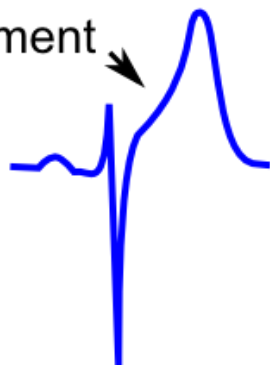
days - weeks - months

# Different shapes of ST elevation due to ischemia

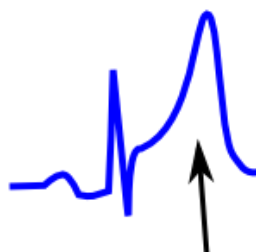


# ST elevation due to early repolarization

concave ST segment



Notched or slurred J point



Non-symmetrical large T wave

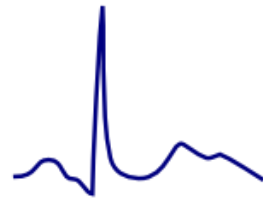
# T wave morphology



Normal



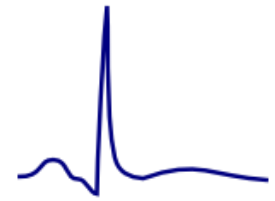
Biphasic



Bifid / notched



Broad / slow



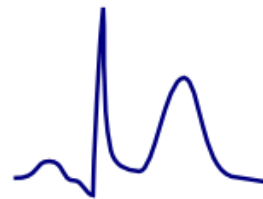
Flat



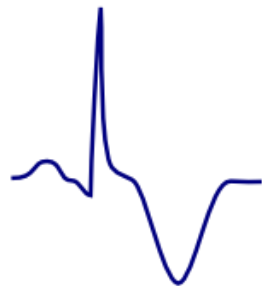
Nonspecific ST-T wave abnormalities



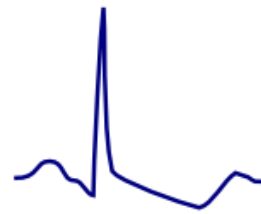
Hyperkalemia



Repolarization Variant



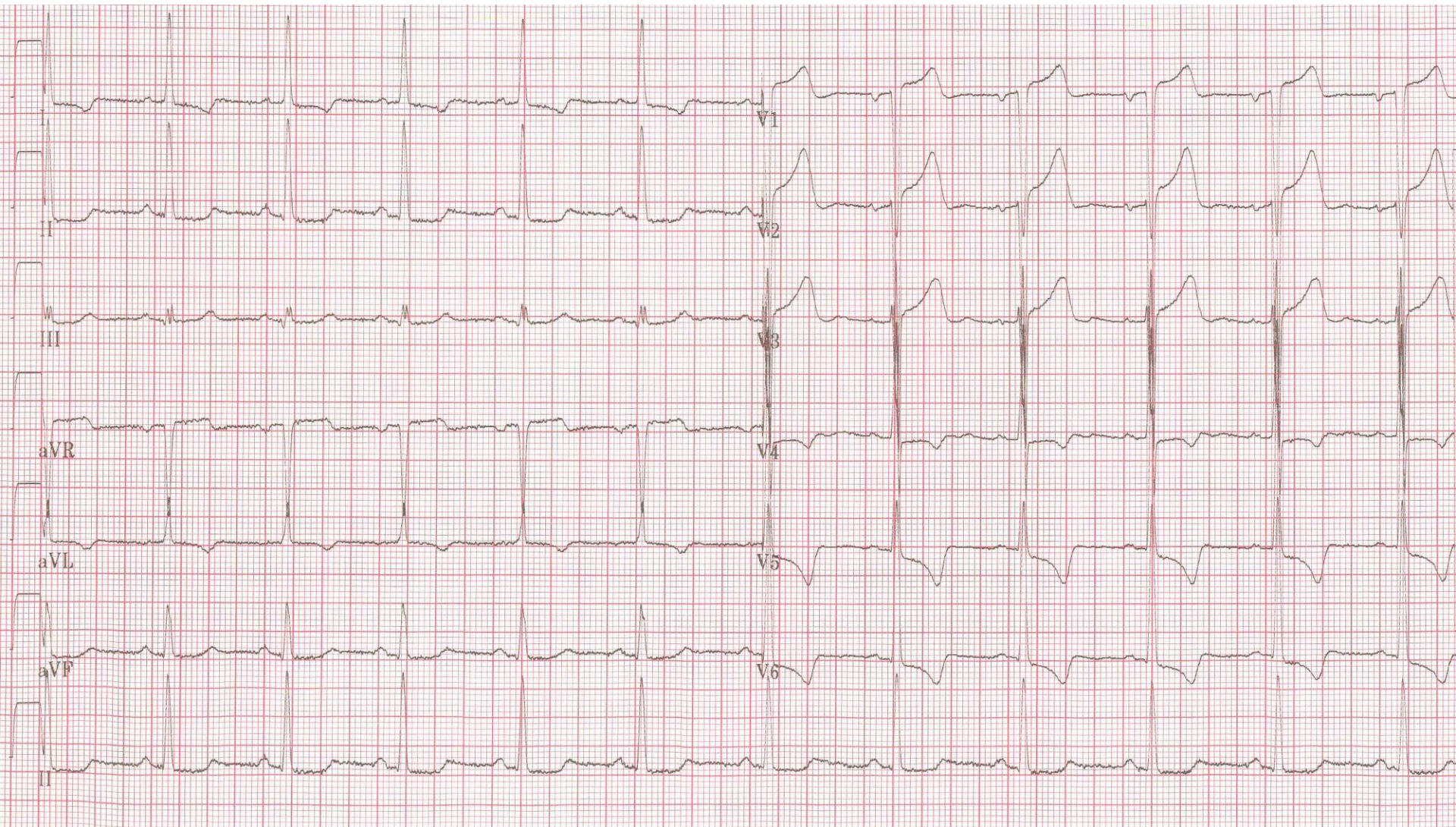
Ischemia



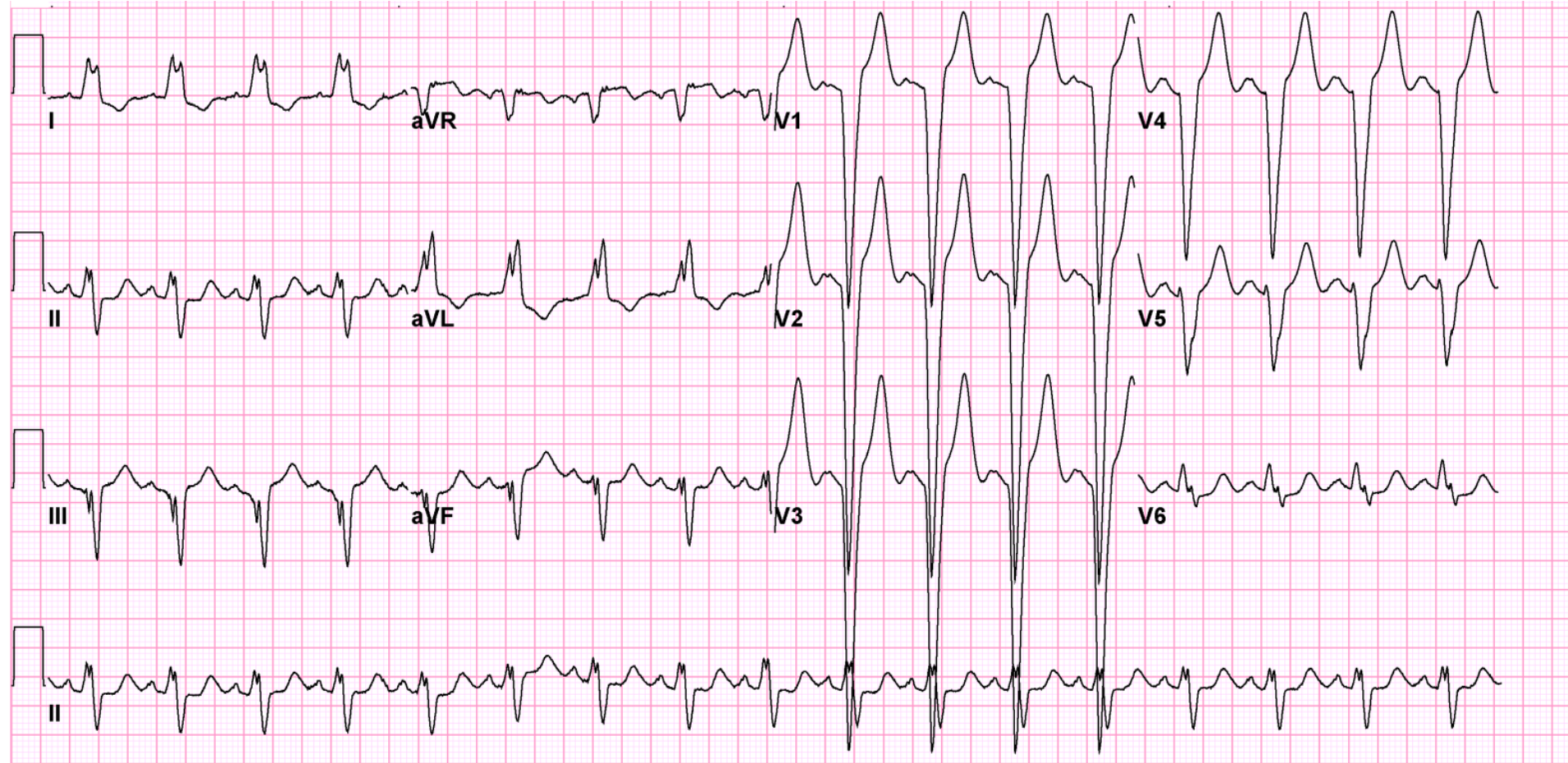
Strain



Prolonged QT interval

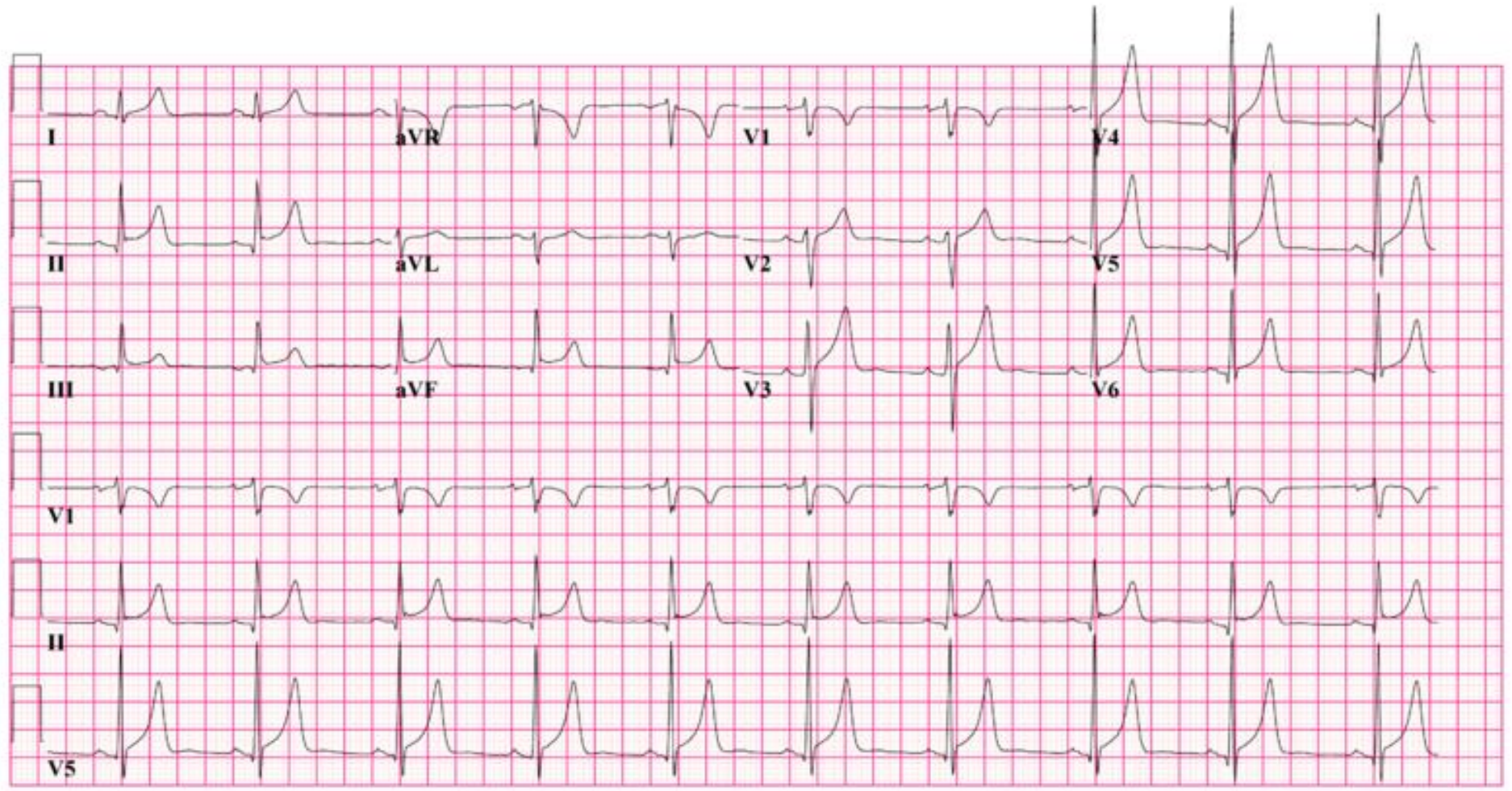


LVH



LBTB





25mm/s 10mm/mV 40Hz 005E 12SL 233 CID: 4

ECG PEDIA.ORG

pericarditis

# Pericarditis



stadium I



stadium II

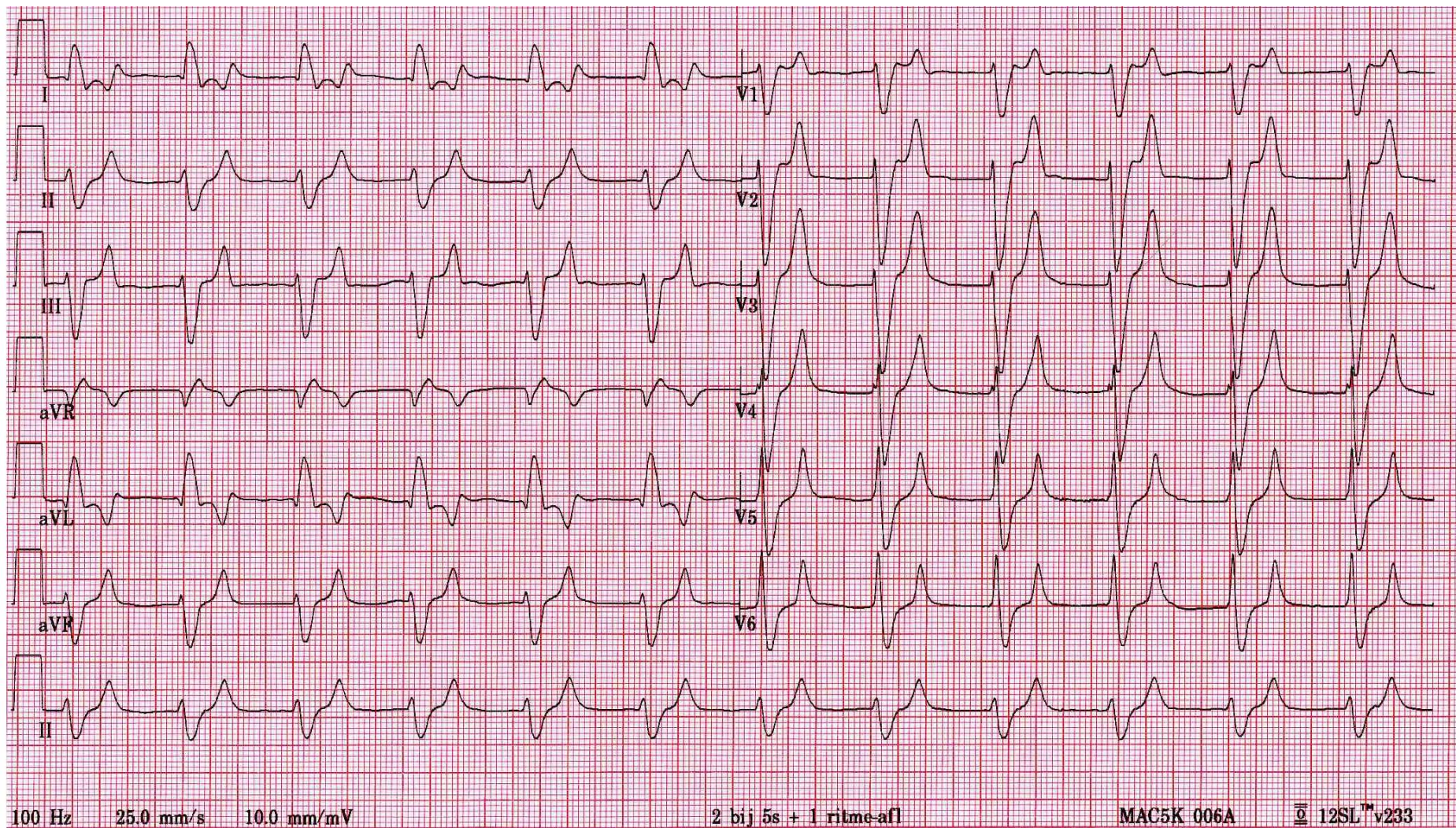


stadium III



stadium IV

stadia pericarditis - [ECGPEDIA.ORG](http://ECGPEDIA.ORG)

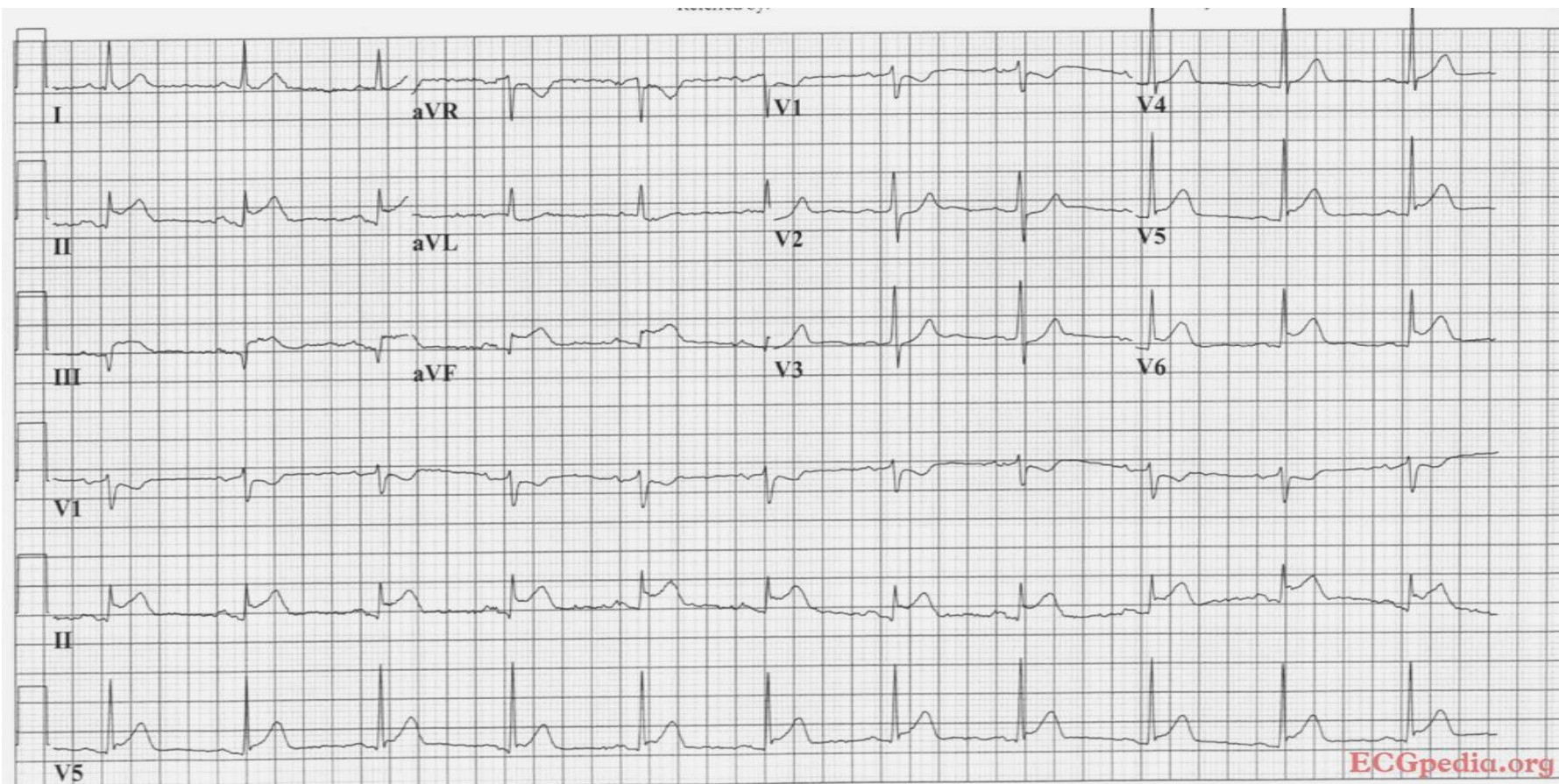


Courtesy of W.G. de Voigt, MD, PhD, Amsterdam, The Netherlands

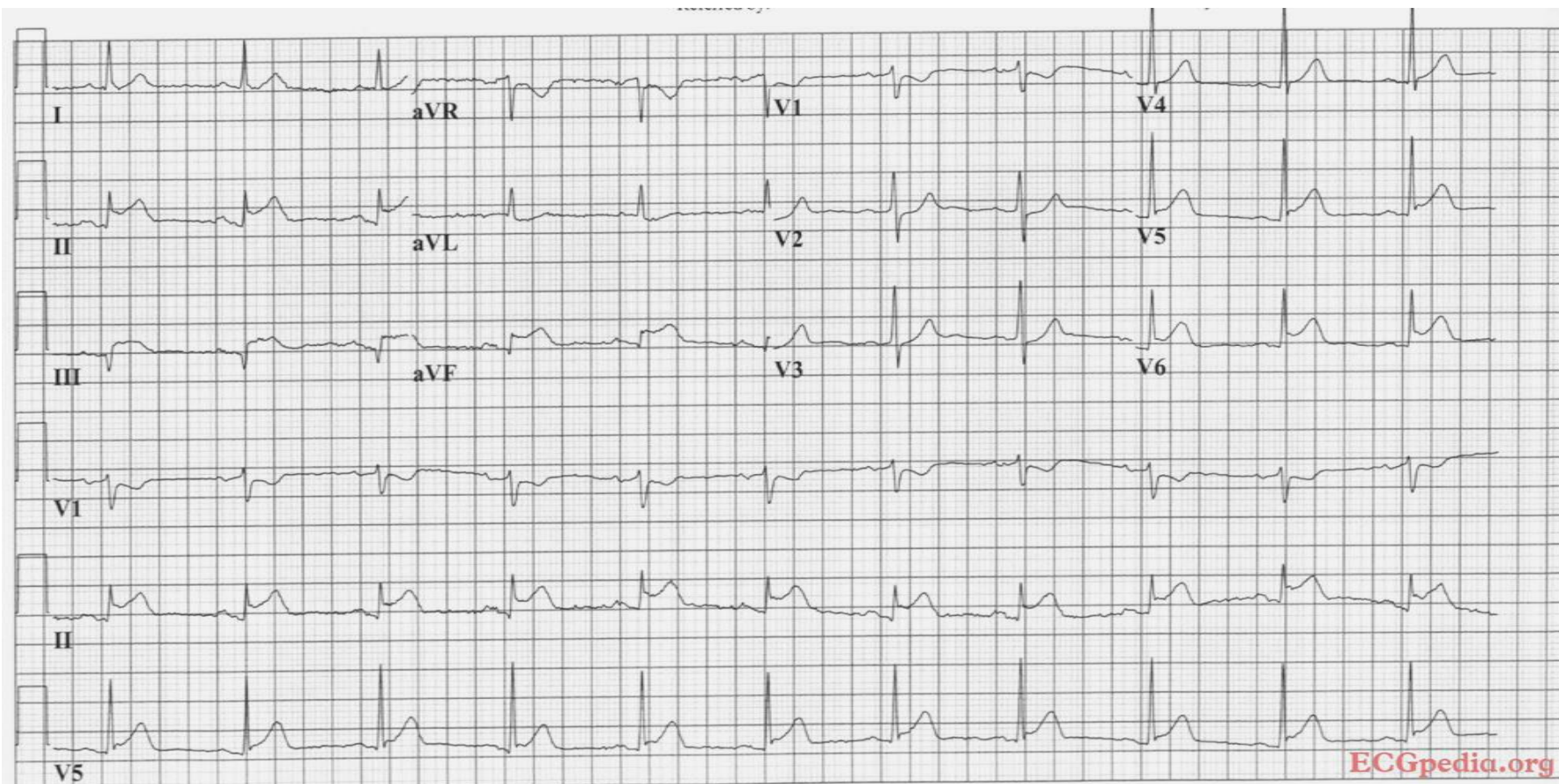
ECG PEDIA.ORG  
part of [cardionetworks.org](http://cardionetworks.org)

hyperkaliëmie

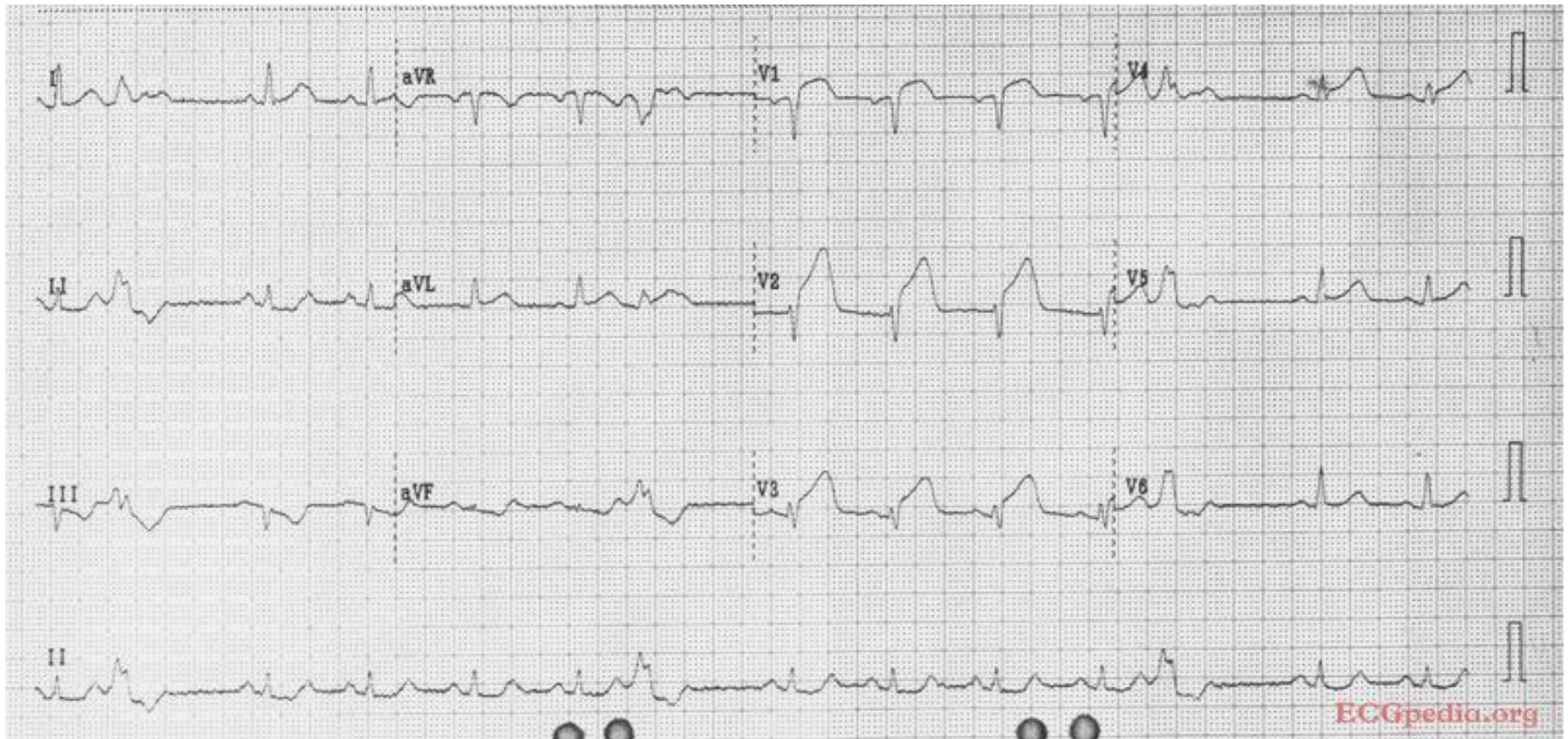
# QUIZ



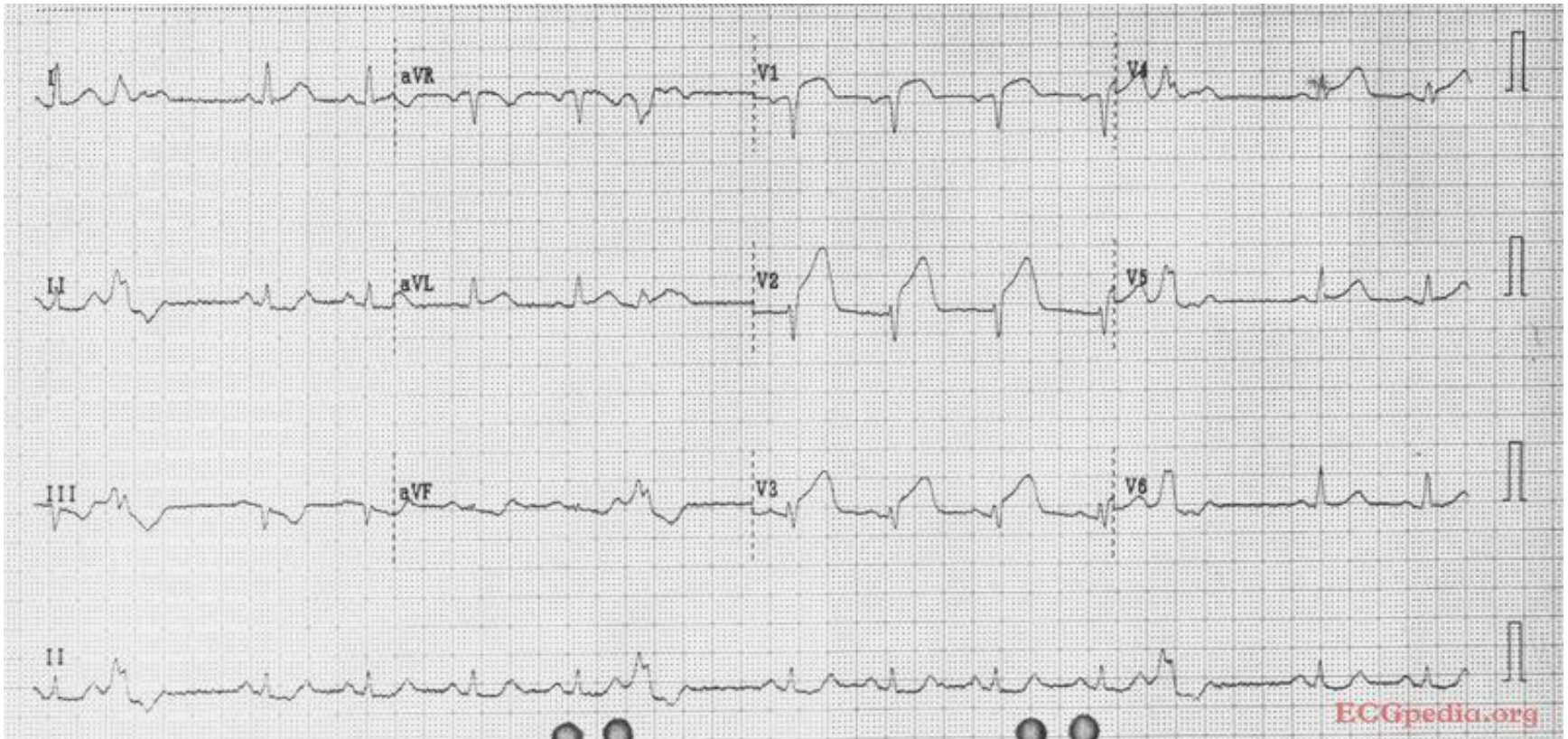
**Waar zit het infarct?**



Waar zit het infarct? → RCX

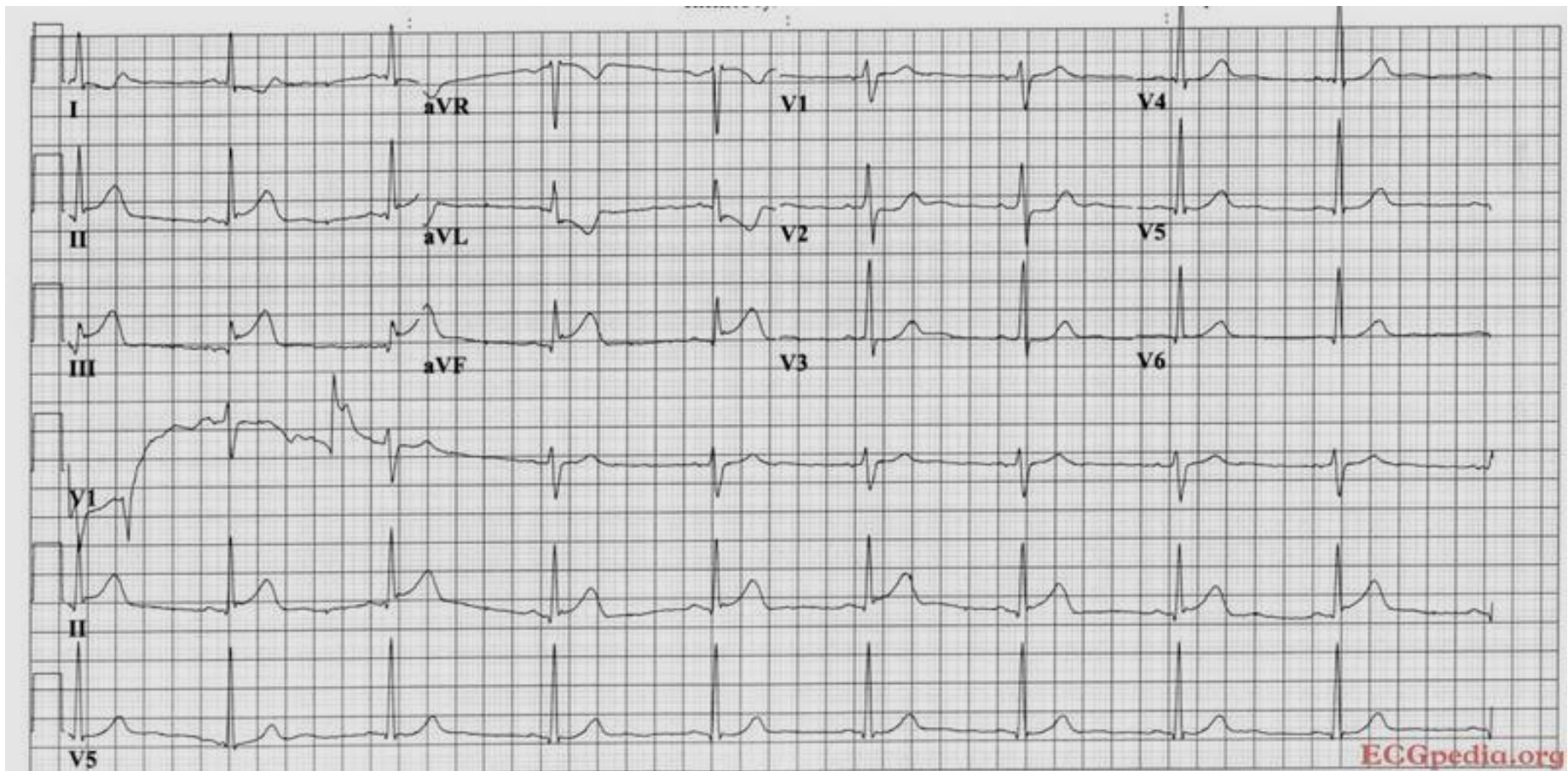


**Waar zit het infarct?**



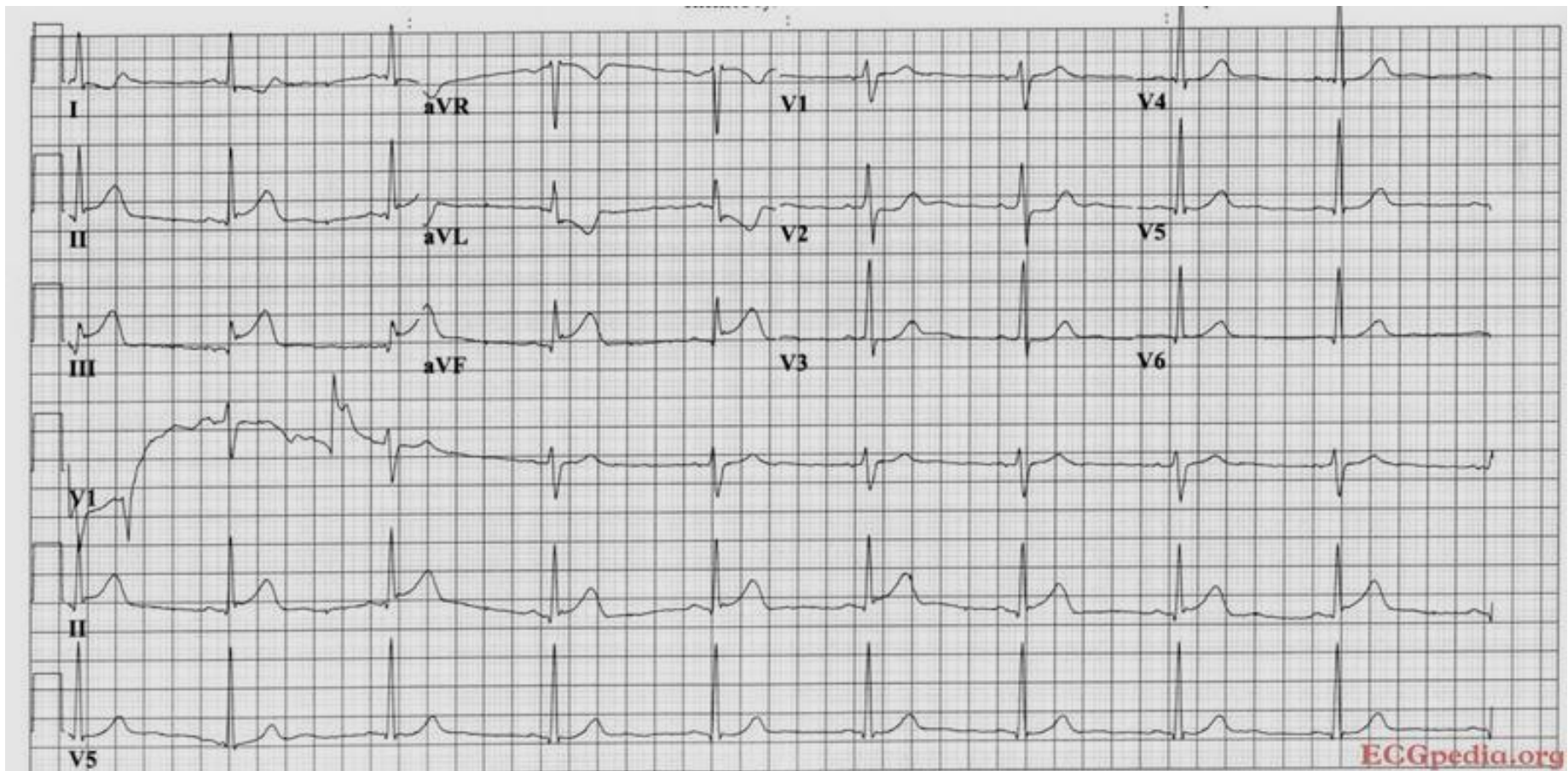
Waar zit het infarct? → proximale LAD



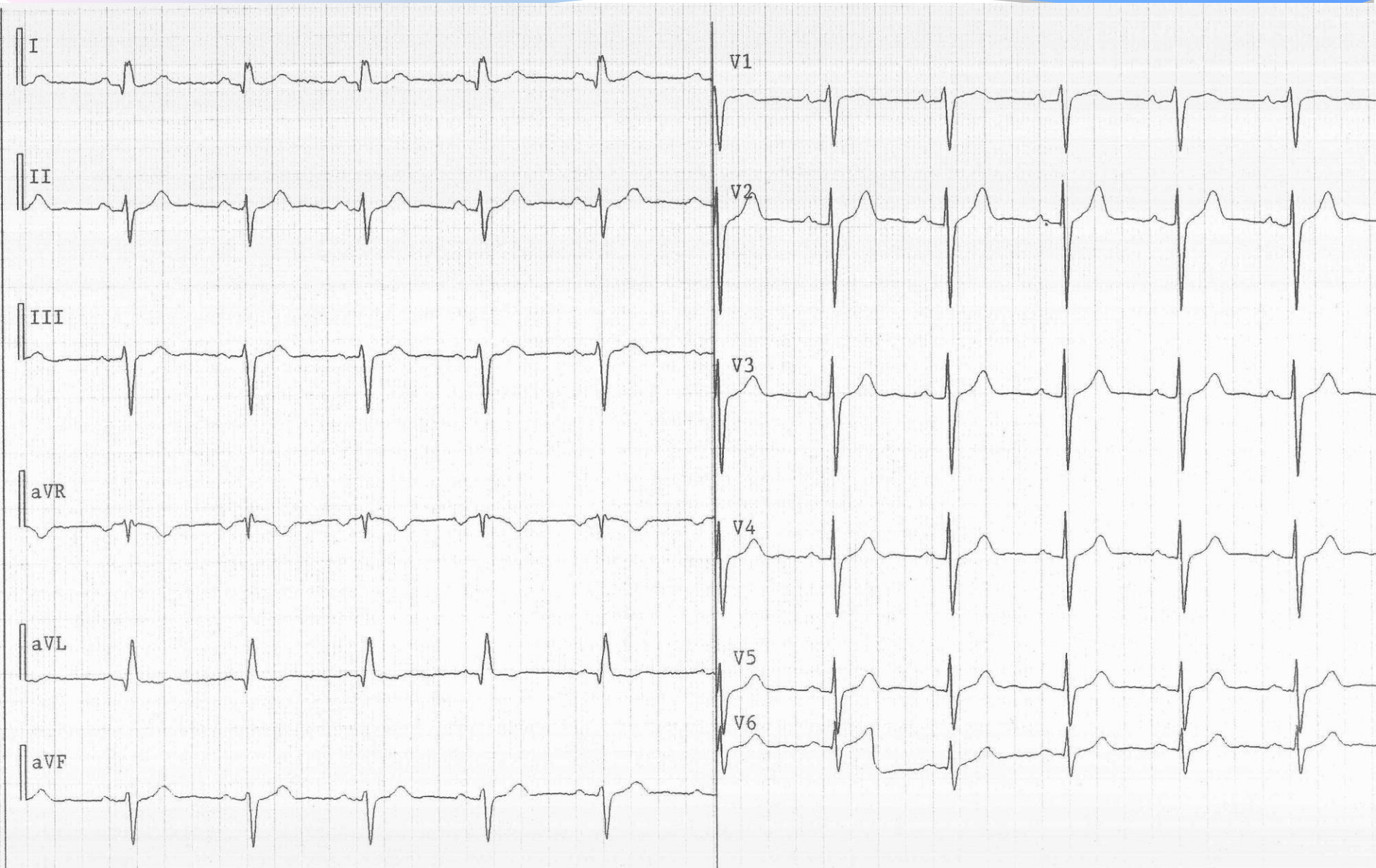


ECGpedia.org

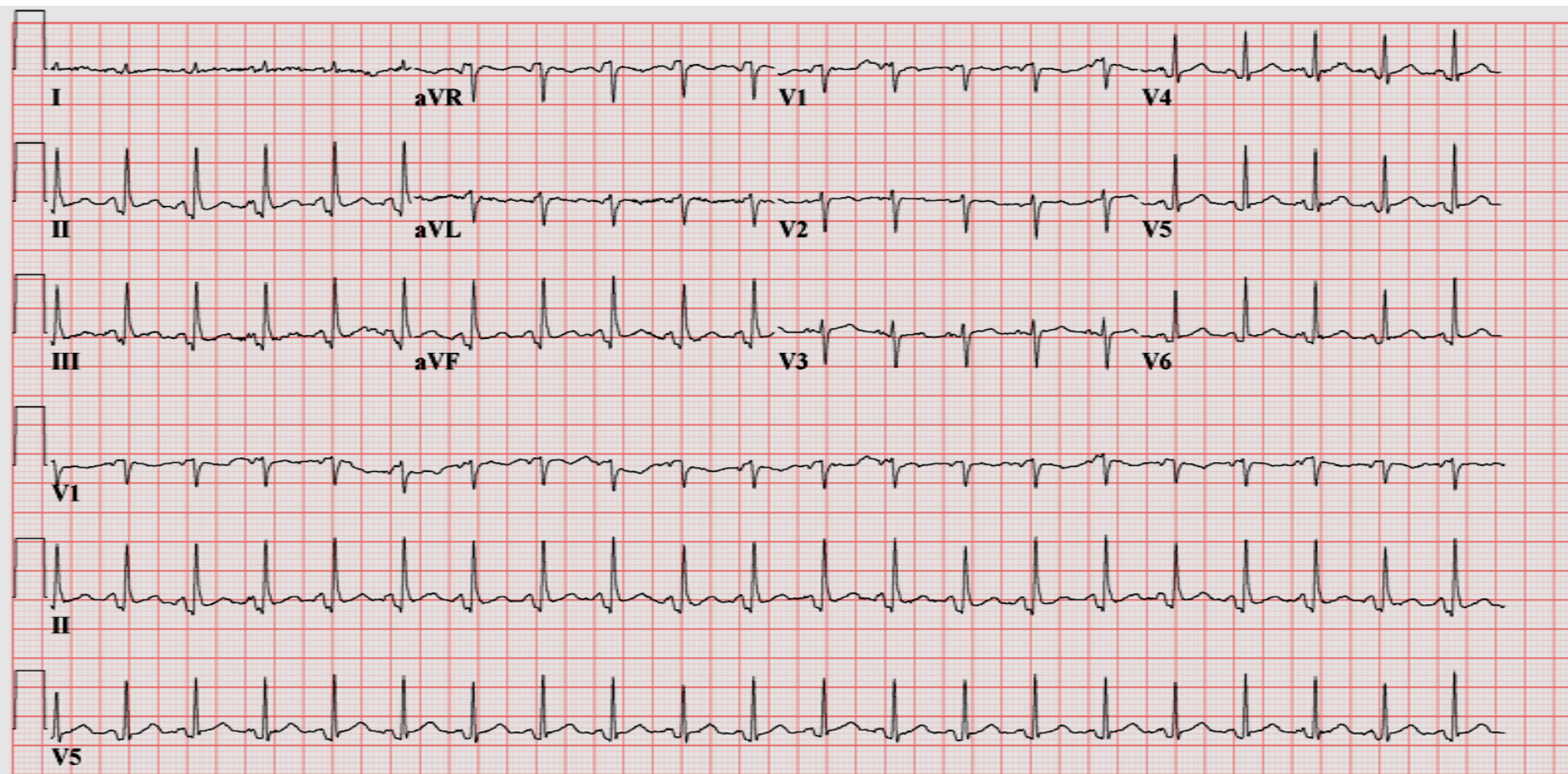
**Waar zit het infarct?**



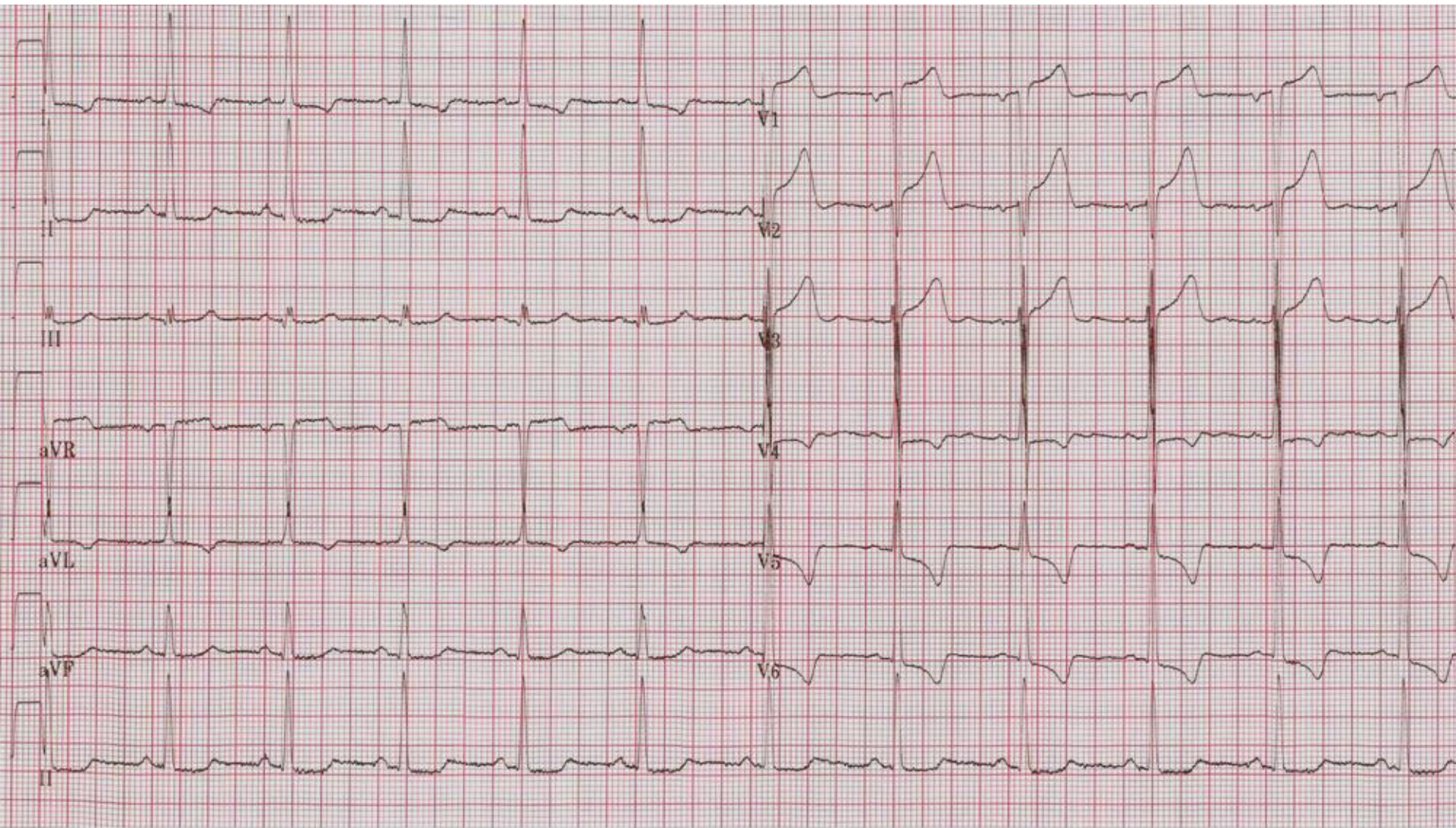
Waar zit het infarct? → RCA

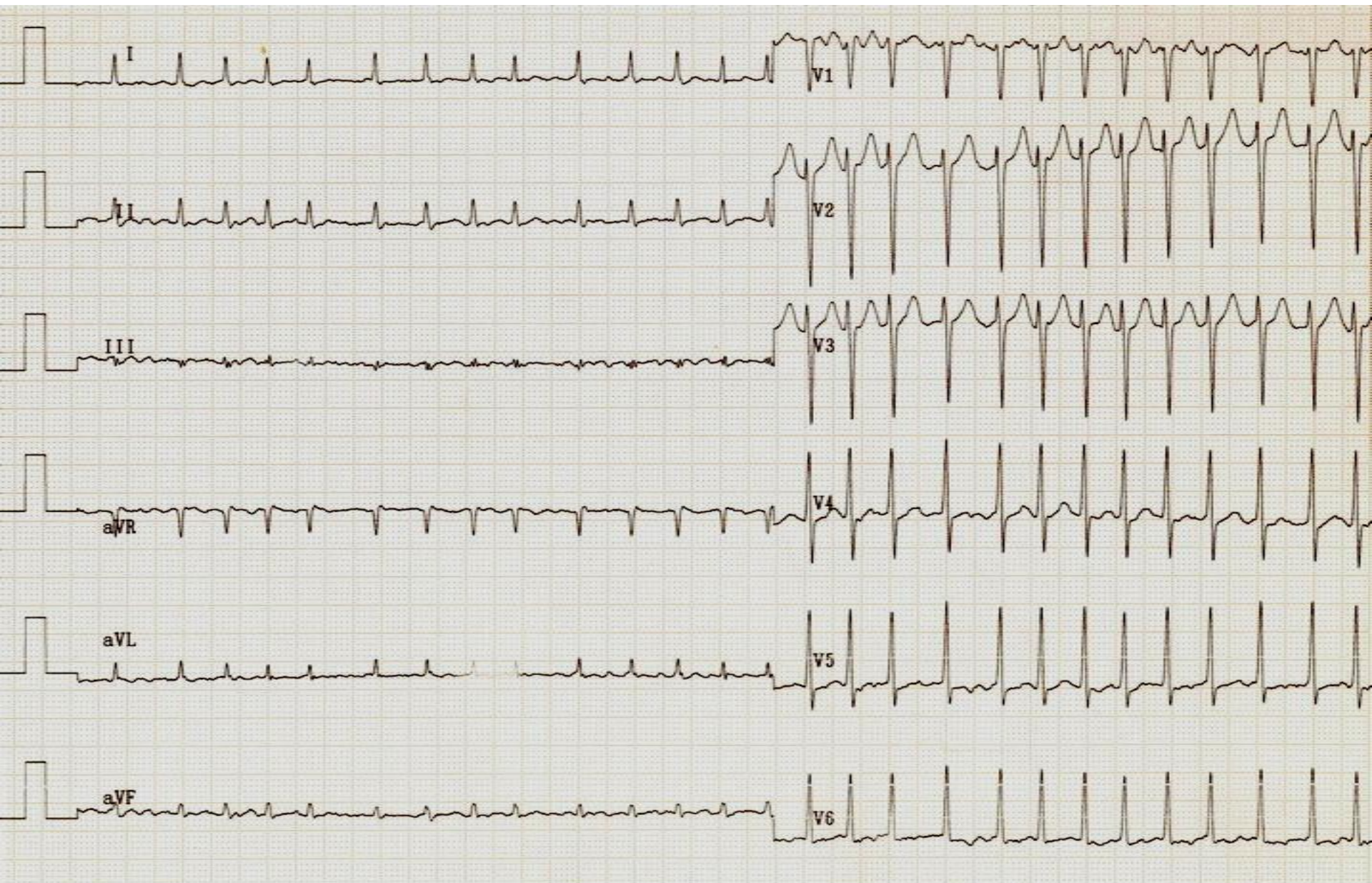


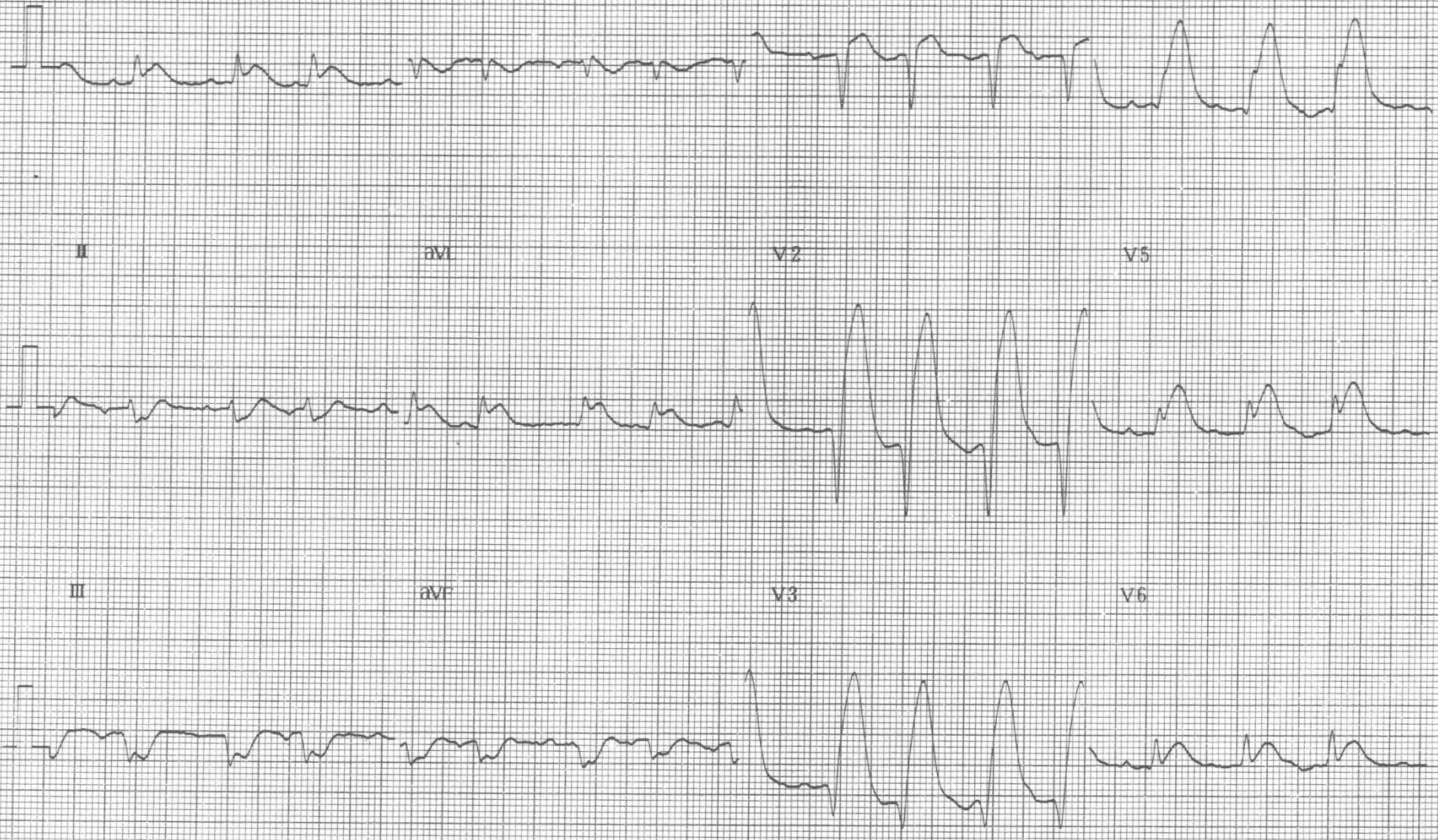




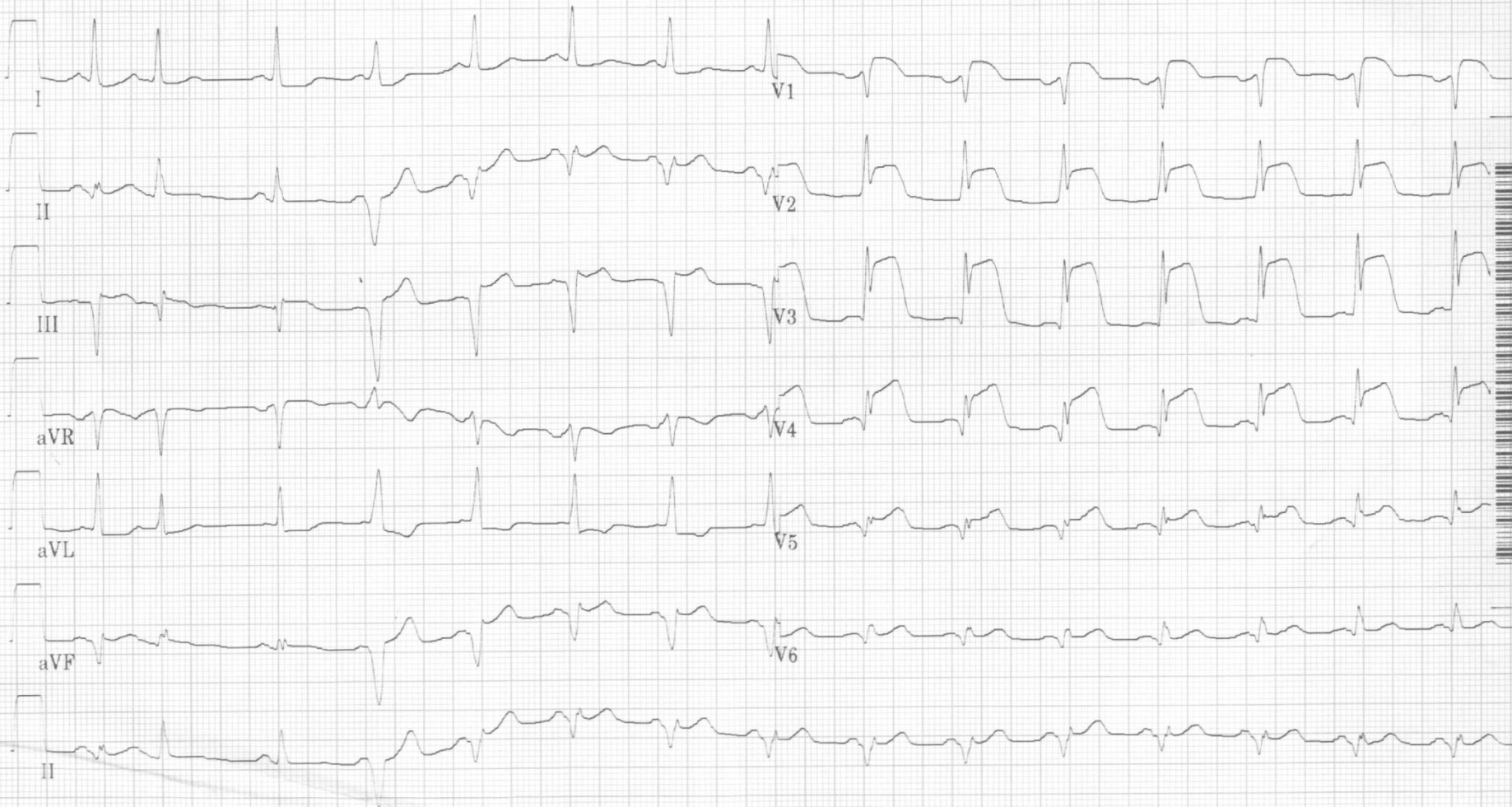
**Pijn op de borst**





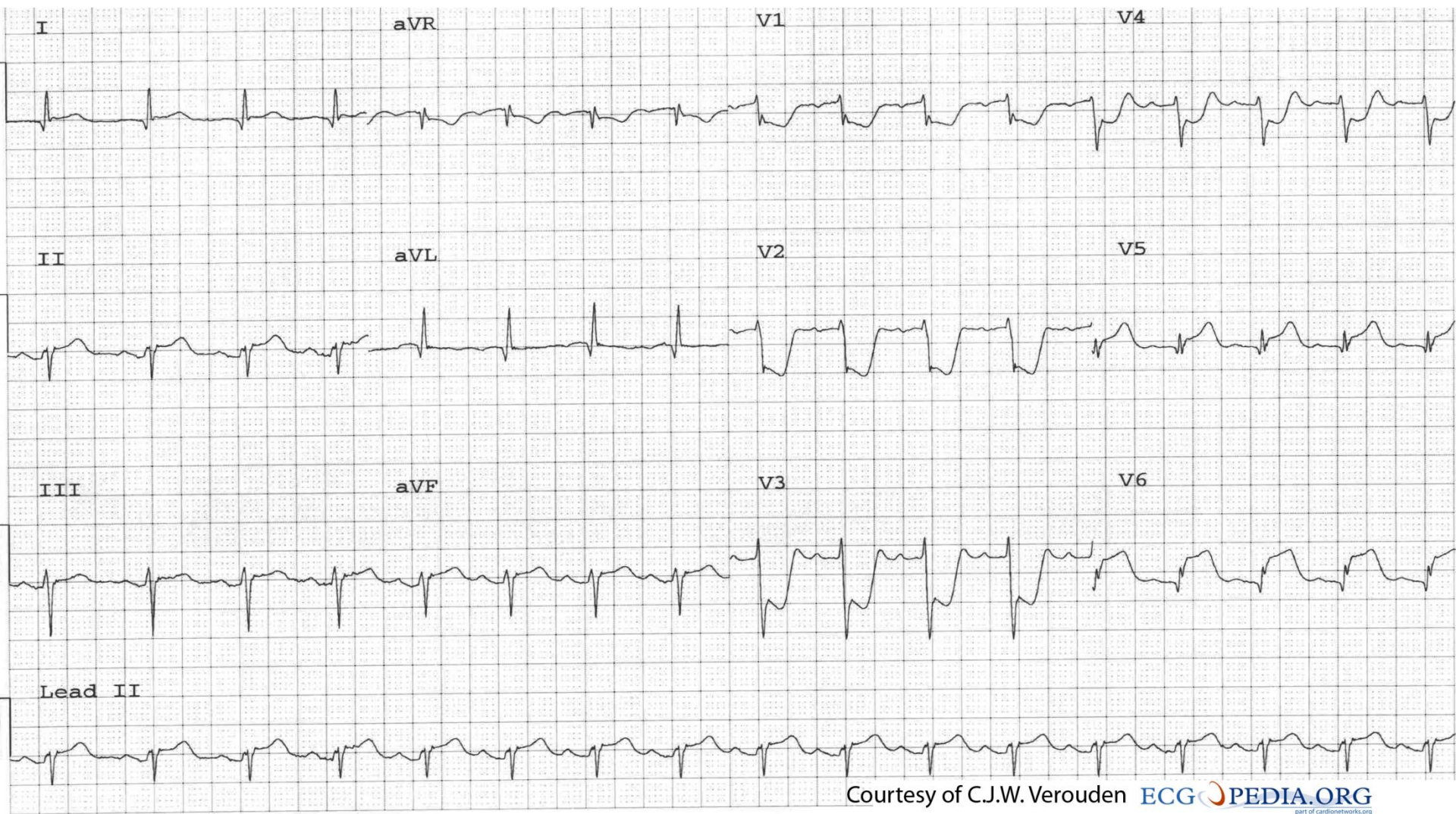






40 Hz 25.0 mm/s 10.0 mm/mV

2 bij 5s + 1 ritme-af1



Courtesy of C.J.W. Verouden [ECGPEDIA.ORG](http://ECGPEDIA.ORG)  
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