

PREPARTICIPATION CARDIOVASCULAR EVALUATION FOR COMPETITIVE SPORT



Quiz ECG

**Sport's
Cardiology
Webinar
June 19th 2020**

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Pontchaillou Hospital - Université Rennes 1 - INSERM UMR 1099



DO YOU GIVE CLEARANCE FOR COMPETITIVE SPORT ?

Athlete (more than 4 hours of intense physical training)

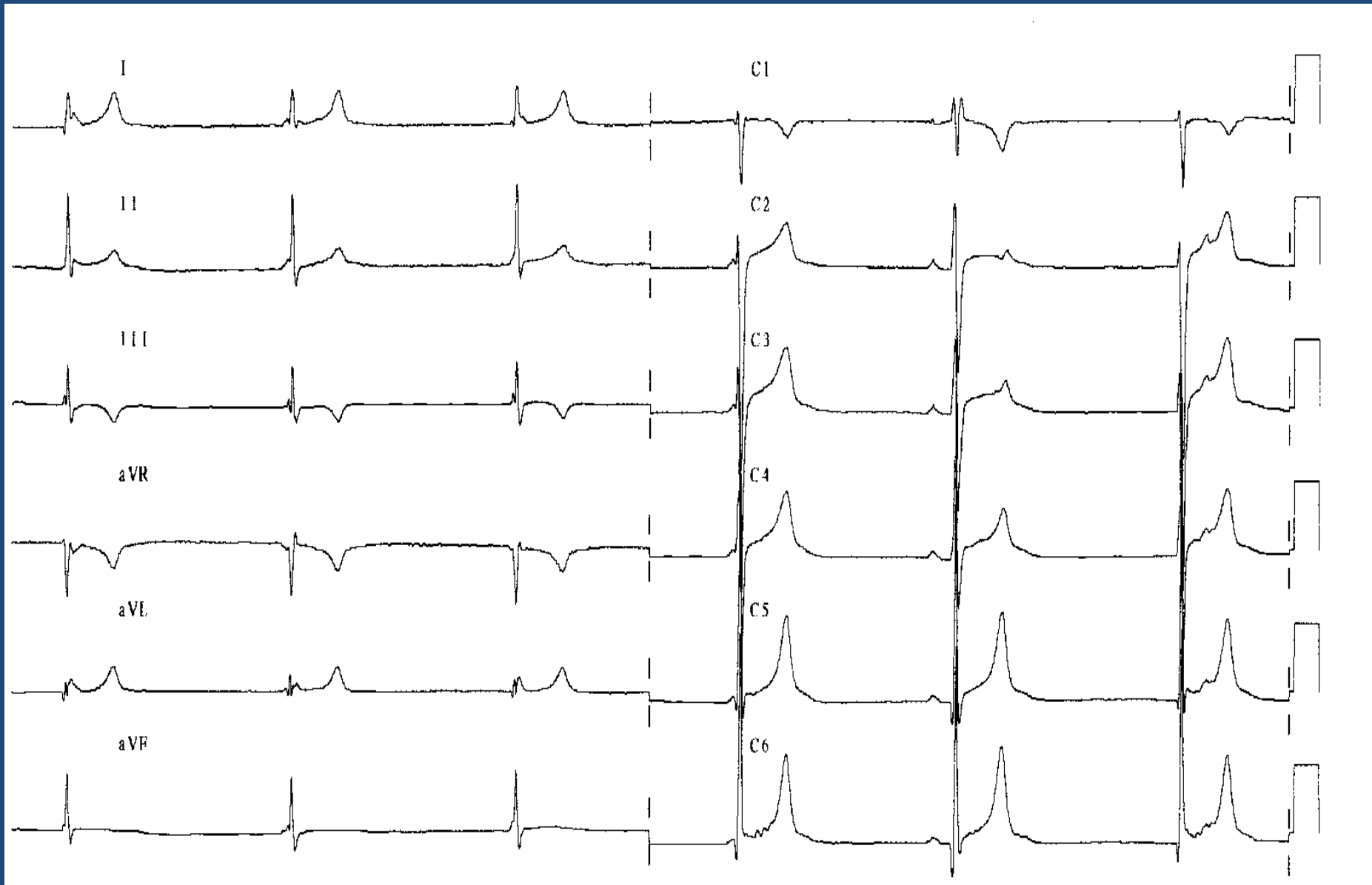
- No symptom**
- No CV familial history**
- Normal physical exam**

Yes

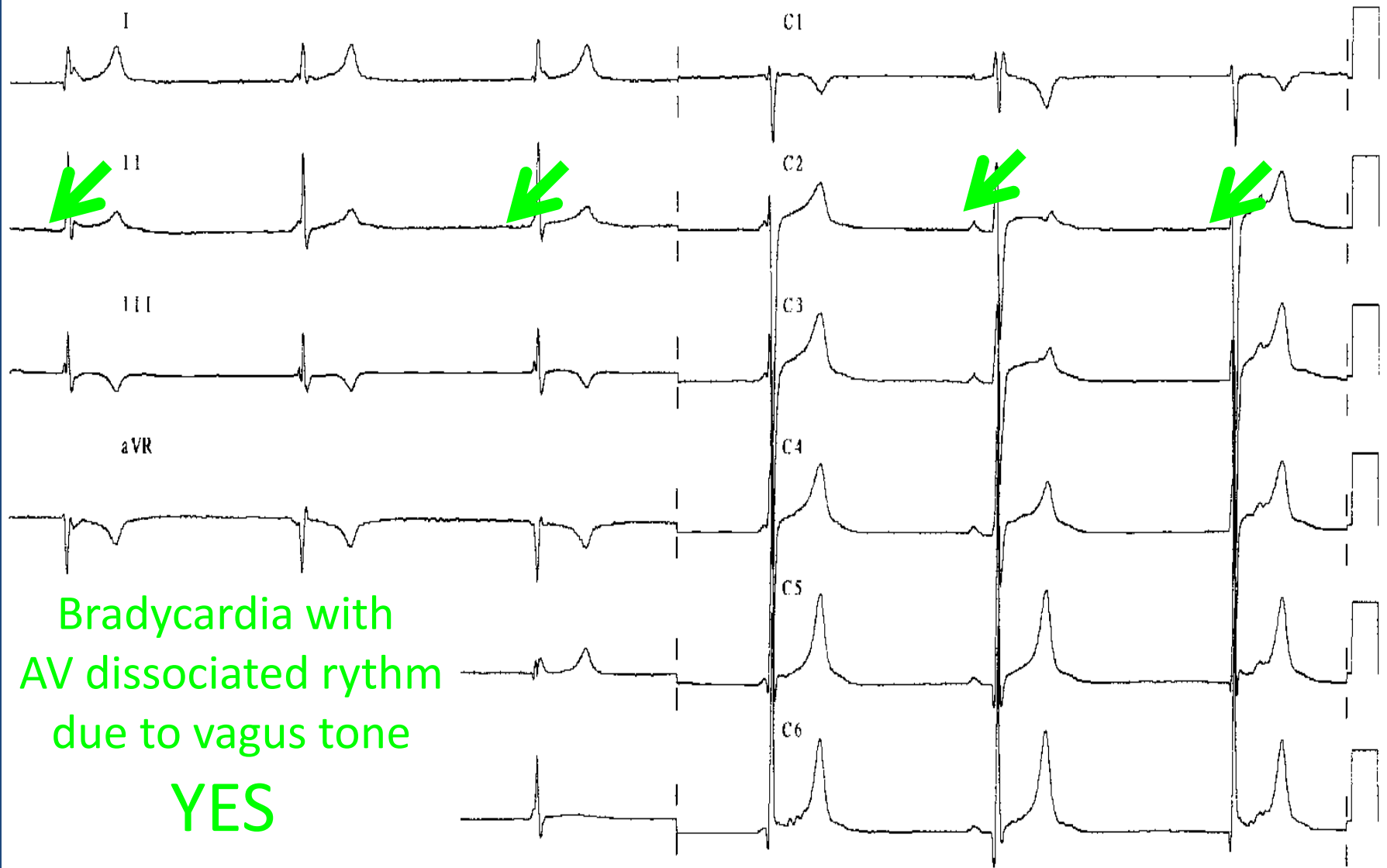
Or

No

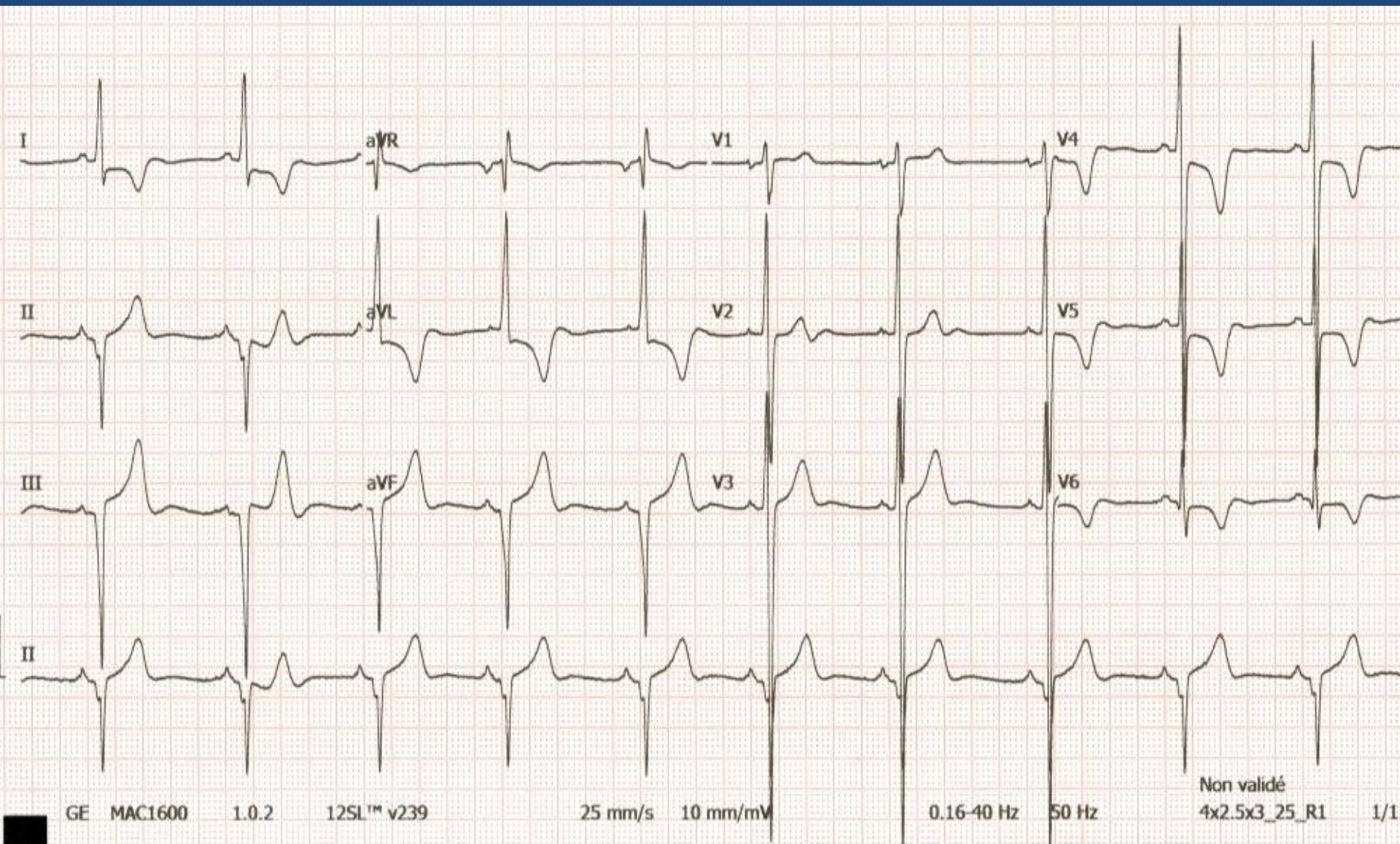
Case 1 : MALE TRIATHLETE 27 YEARS OLD



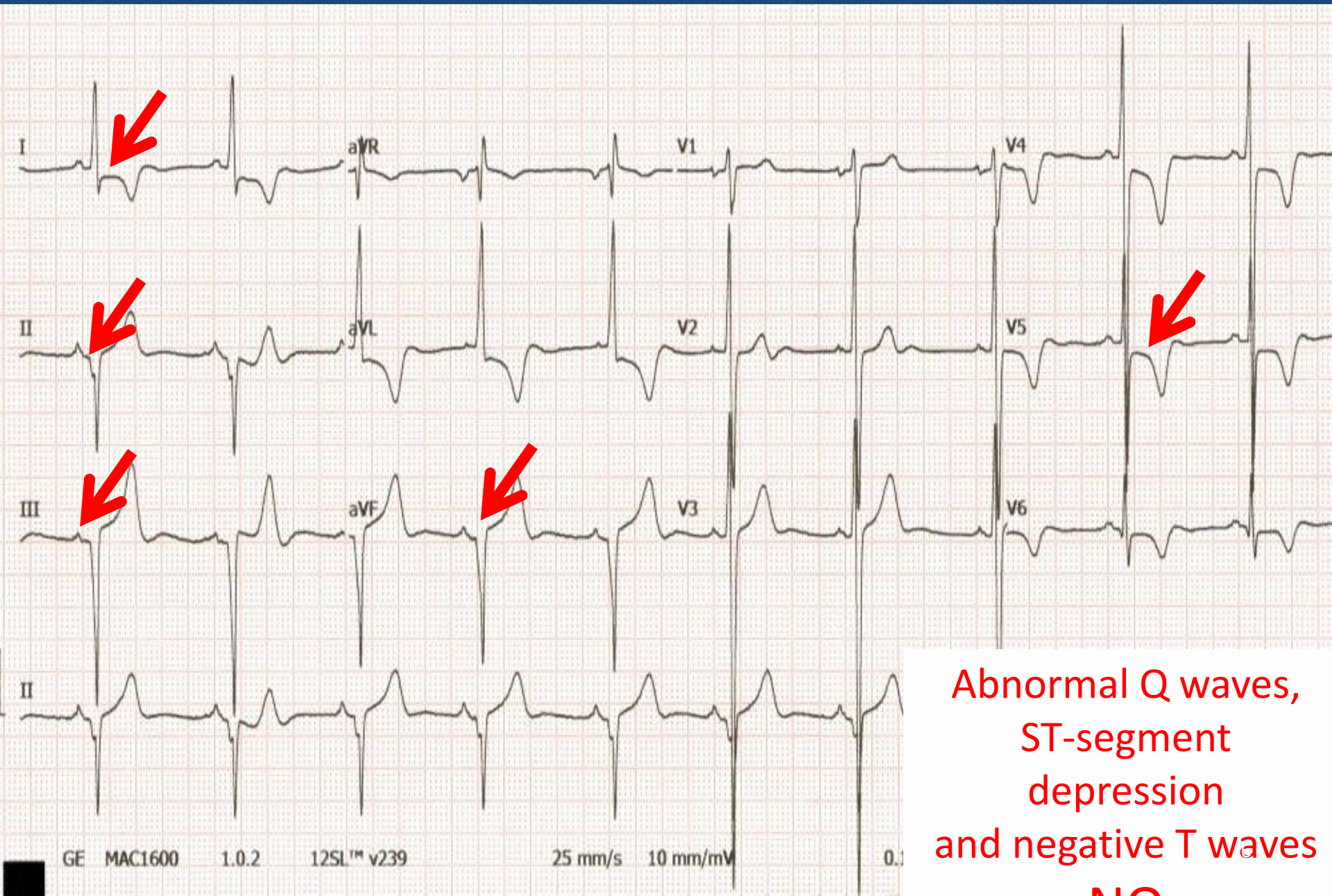
Case 1 : MALE TRIATHLETE 27 YEARS OLD



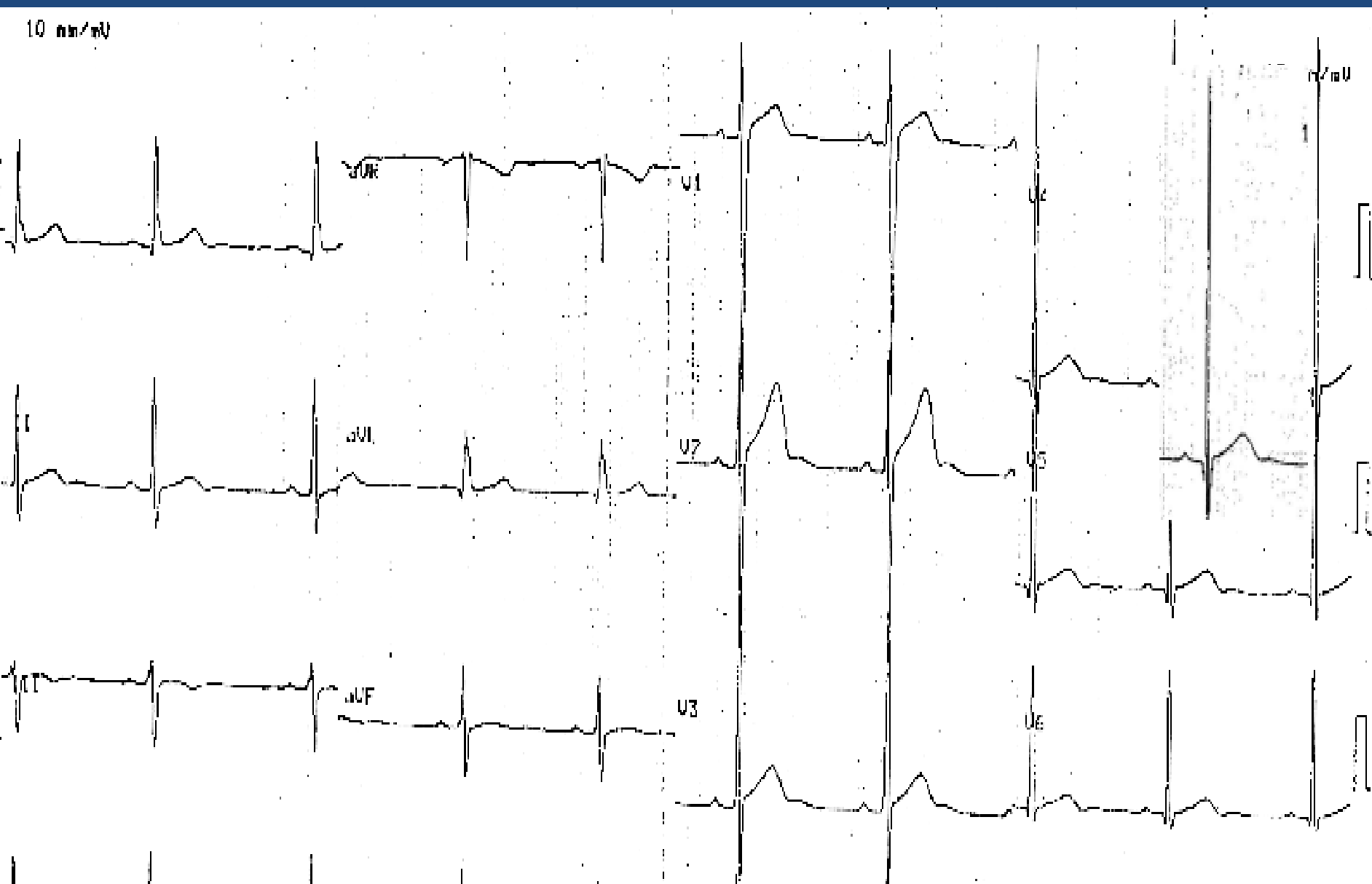
CASE 2 : MALE VOLLEY-BALL PLAYER 16 YEARS OLD



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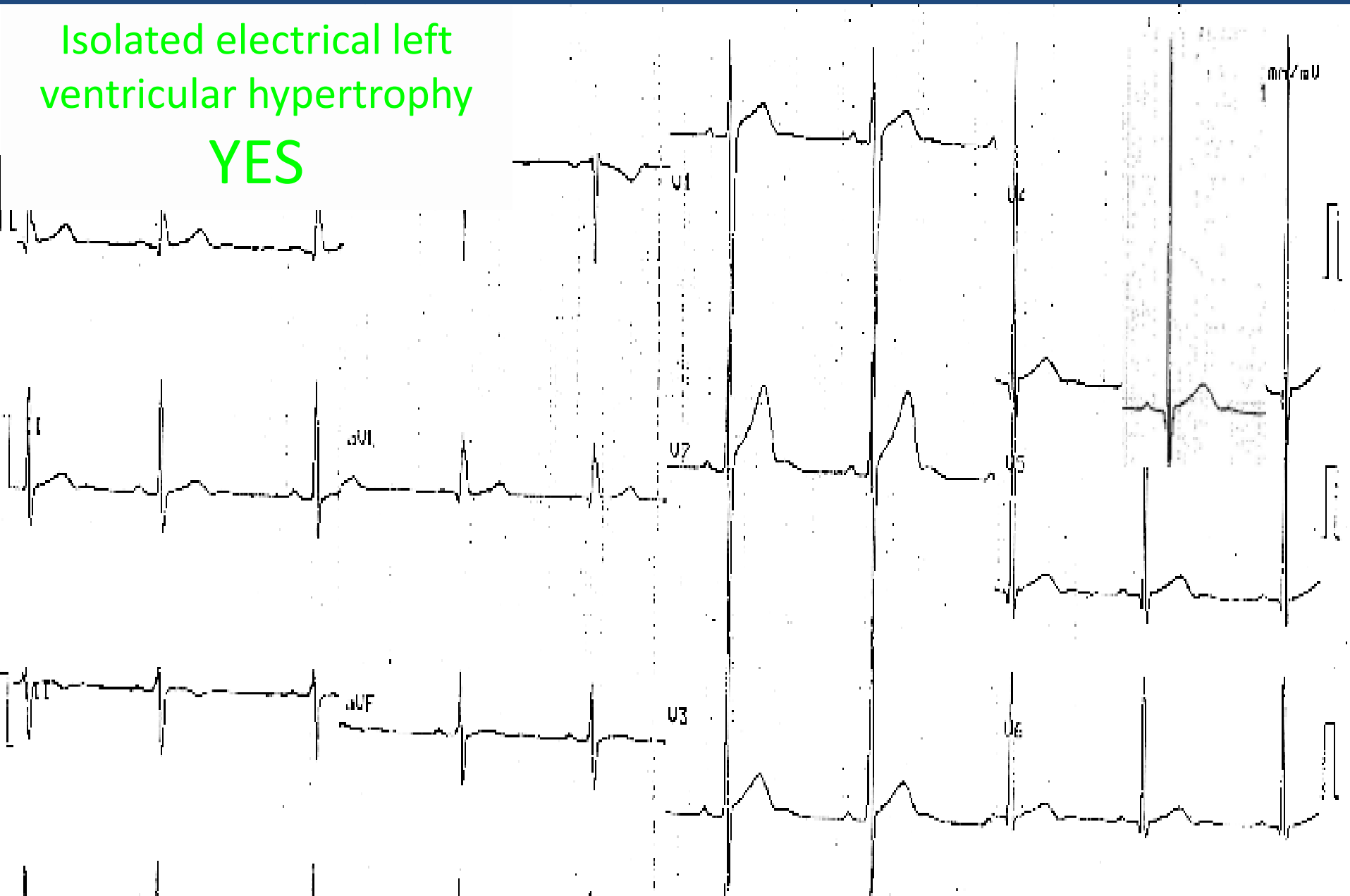
CASE 3 : MIDDLE DISTANCE RUNNER 23 YEARS OLD



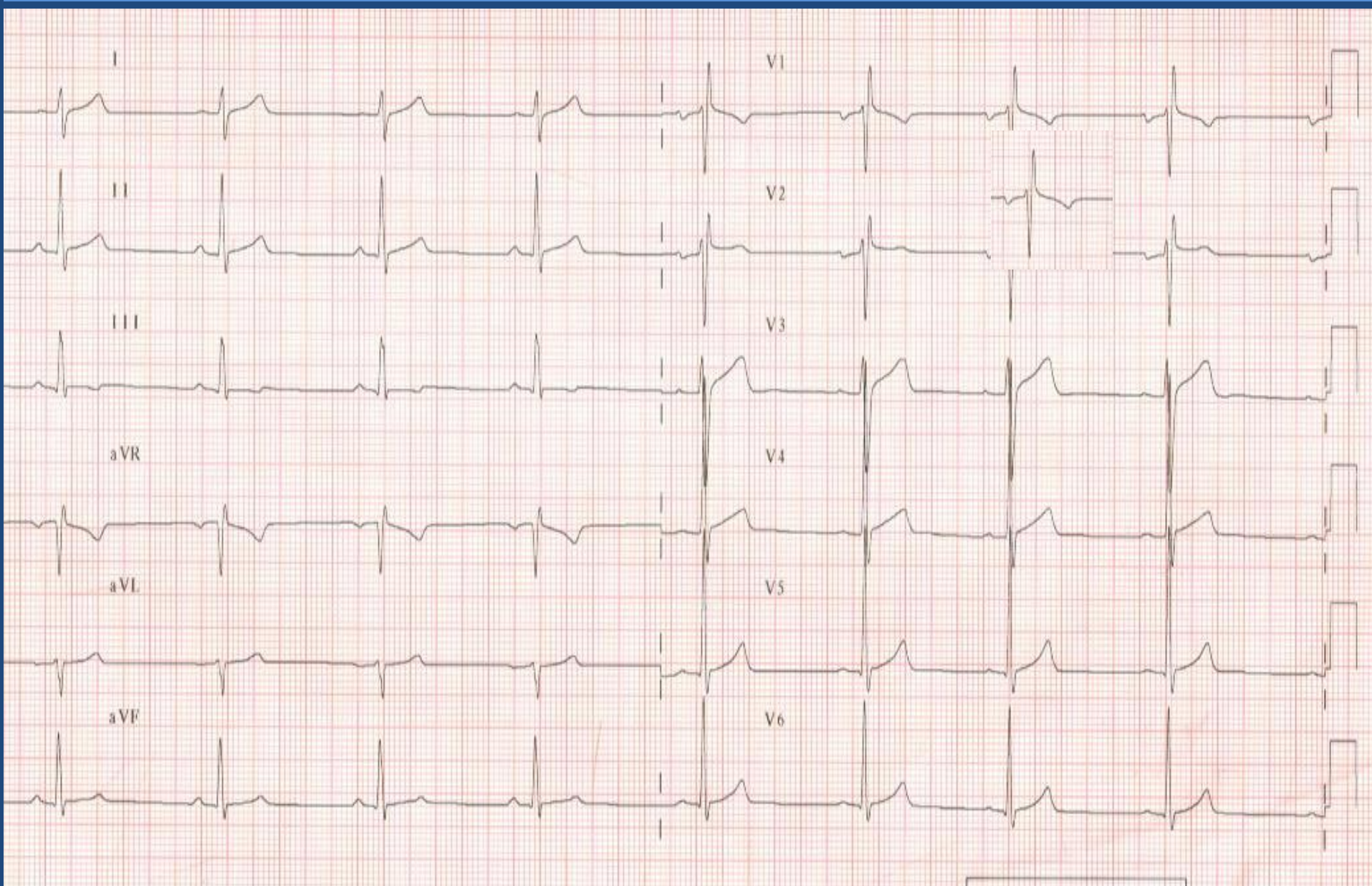
CASE 3 : MIDDLE DISTANCE RUNNER 23 YEARS OLD

Isolated electrical left
ventricular hypertrophy

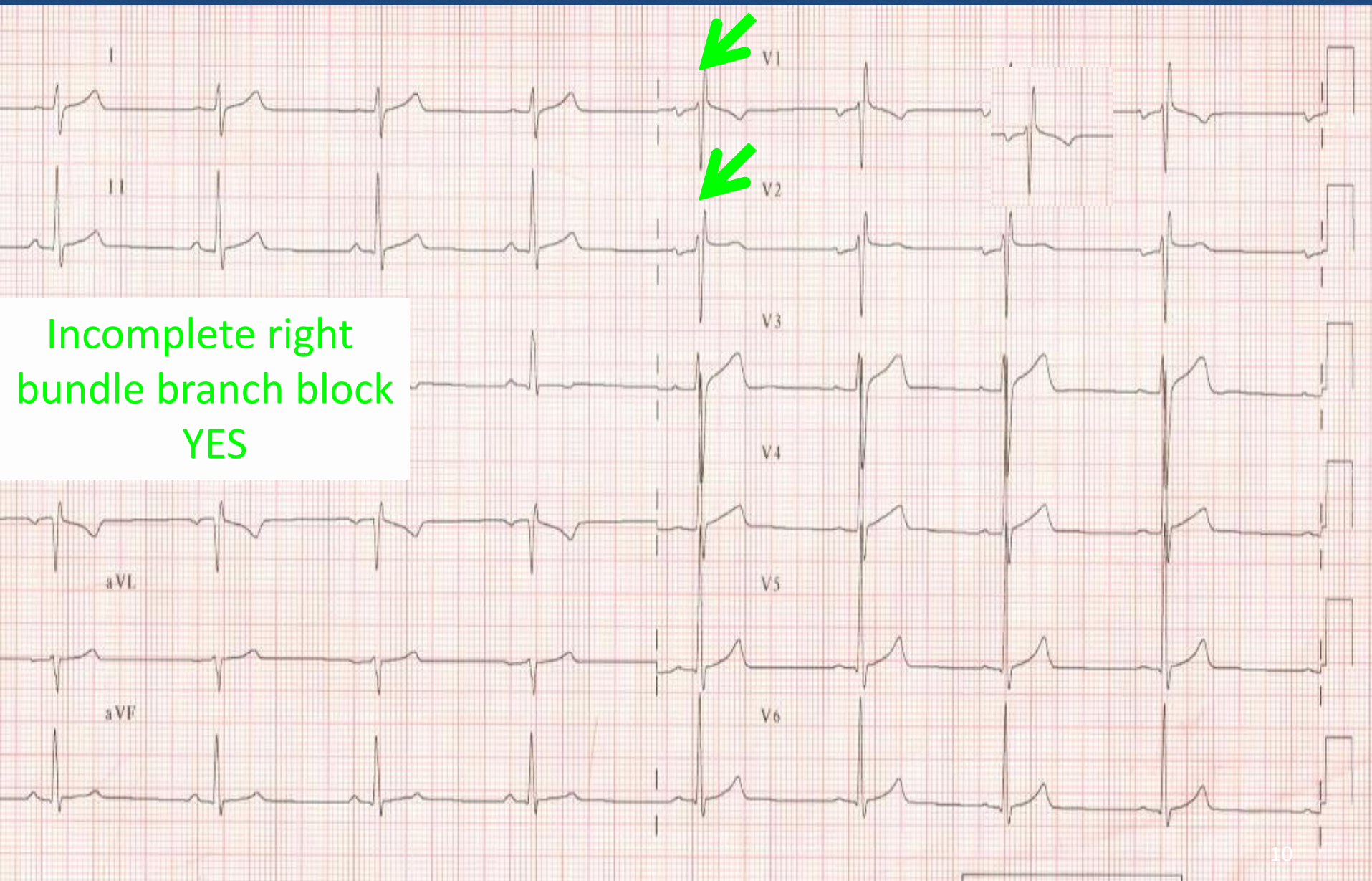
YES



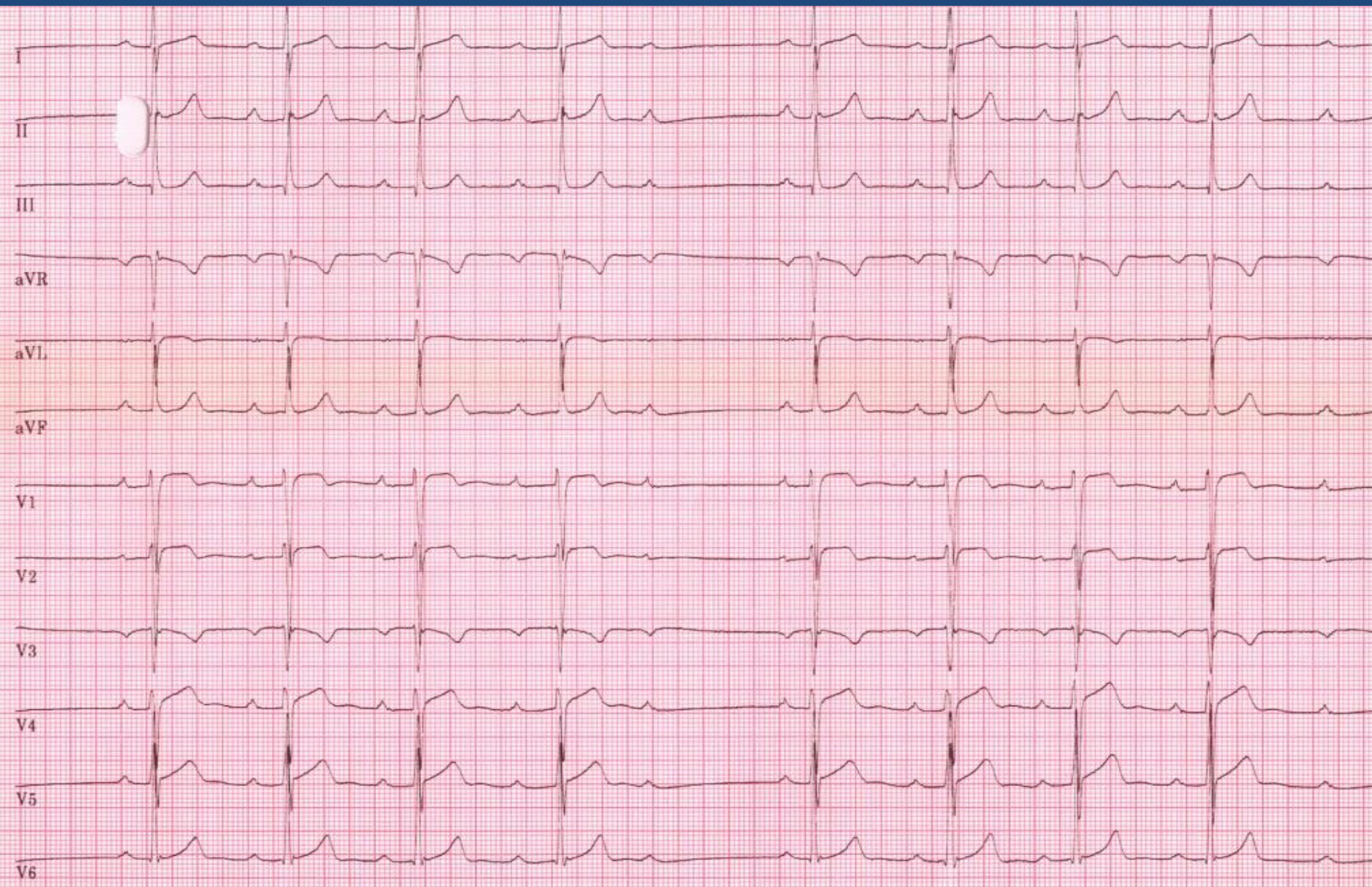
CASE 4 : AFRICAN BASKET-BALL PLAYER 22 YEARS OLD



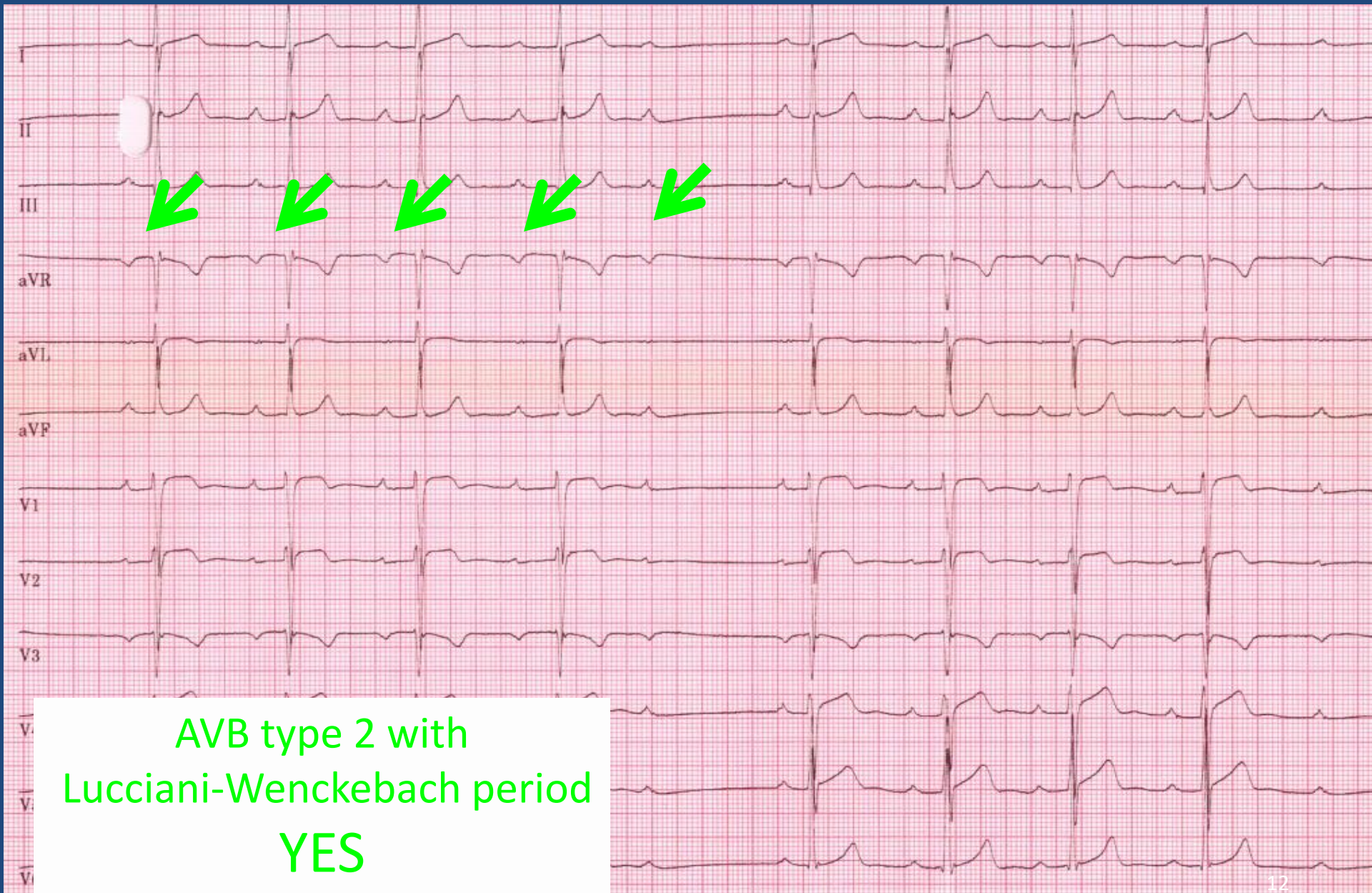
CASE 4 : BASKET-BALL PLAYER 22 YEARS OLD



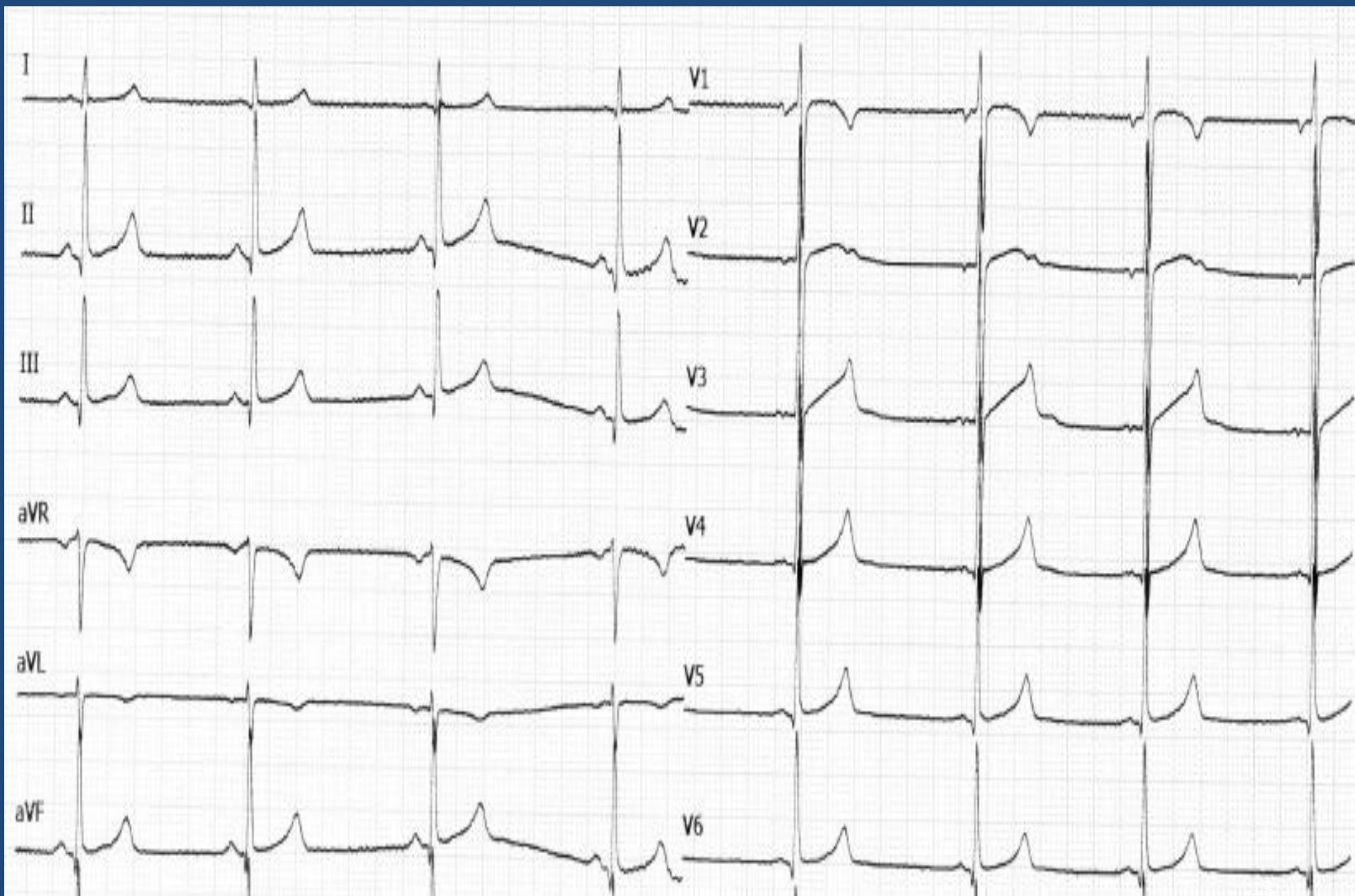
CASE 5 : MALE MARATHON RUNNER 31 YEARS OLD



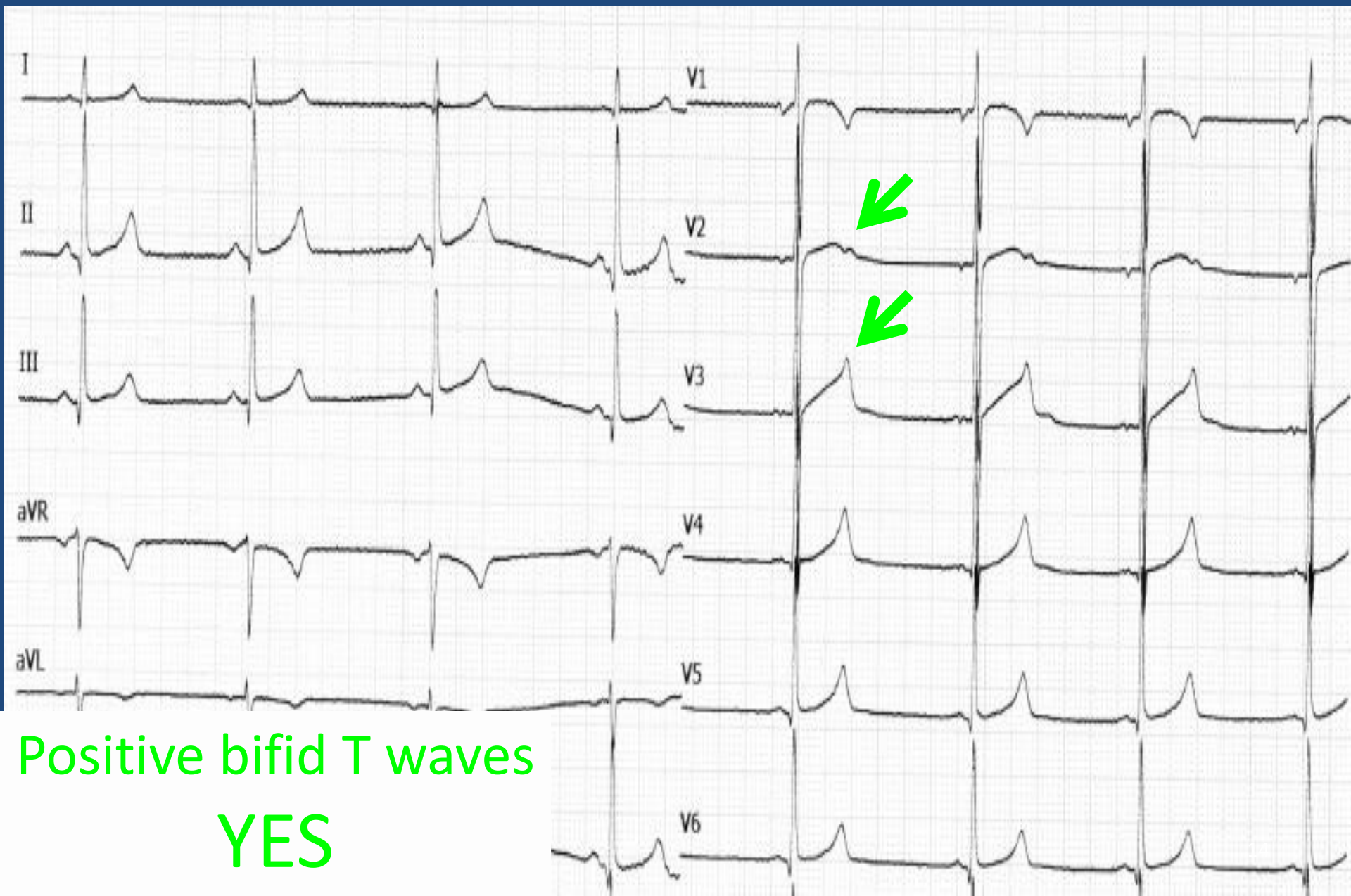
CASE 5 : MALE MARATHON RUNNER 31 YEARS OLD



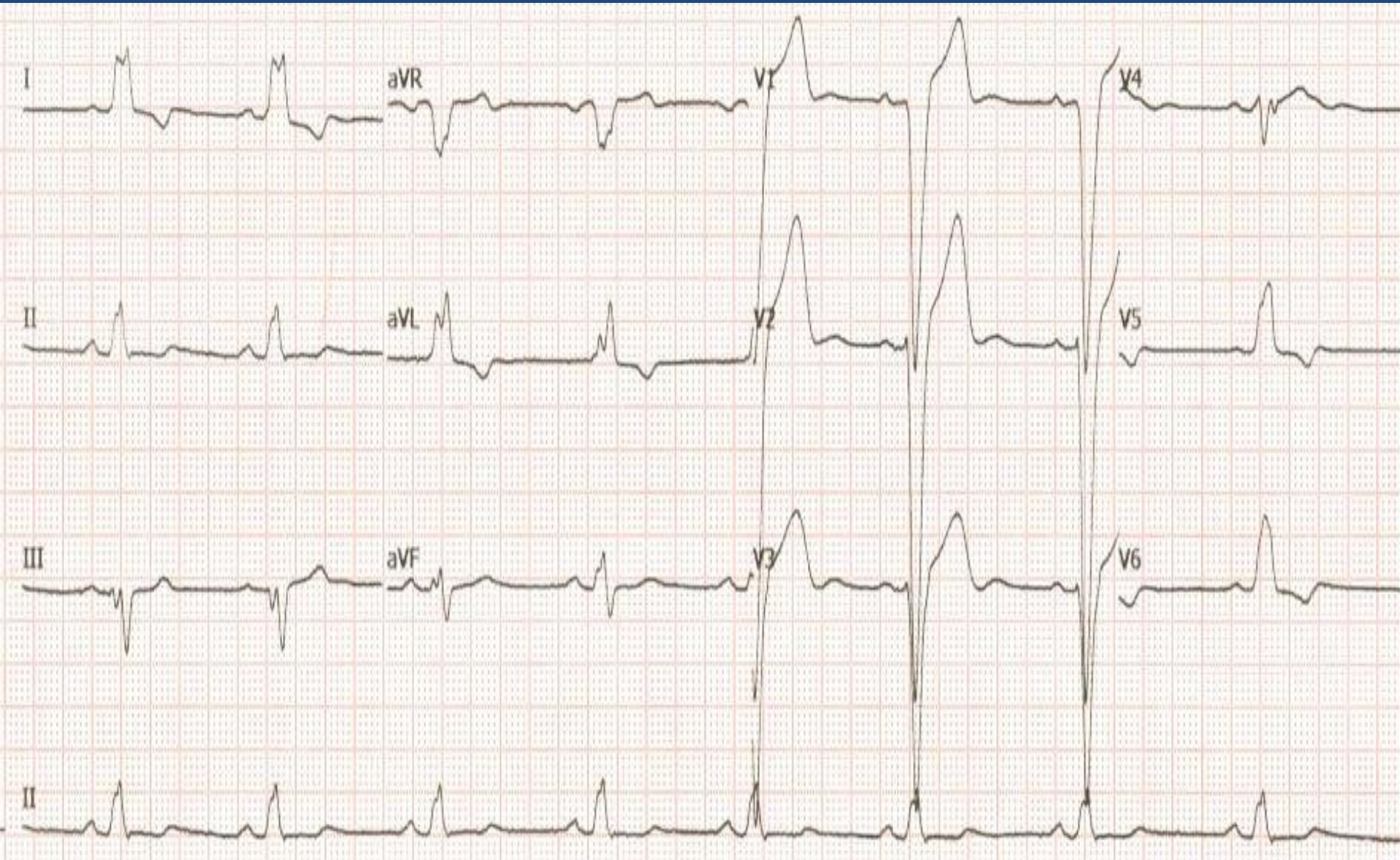
CASE 6 : FEMALE MARATHON RUNNER 31 YEARS OLD



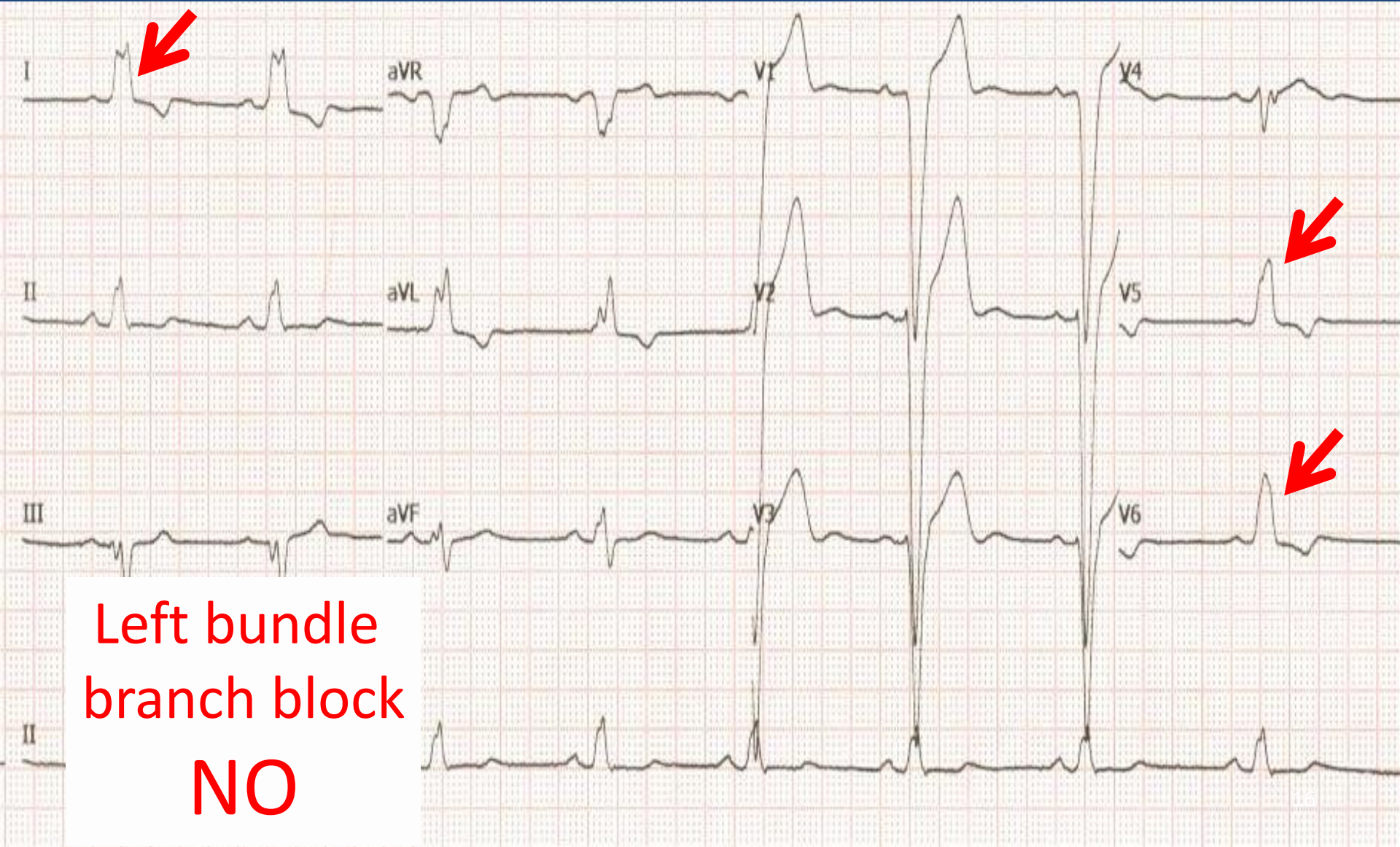
CASE 6 : FEMALE MARATHON RUNNER 31 YEARS OLD



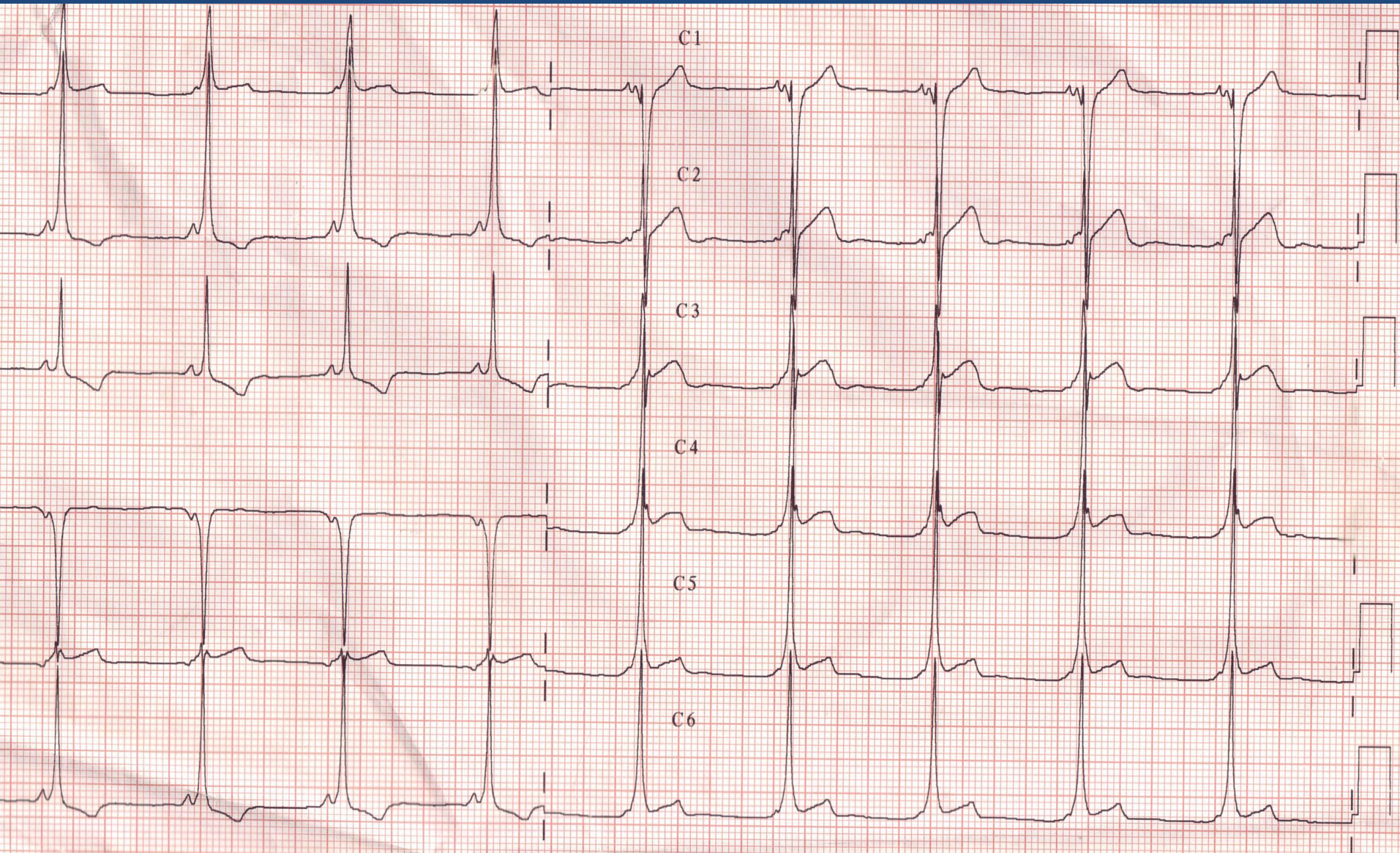
CASE 7 : MALE GOLF PLAYER 42 YEARS OLD



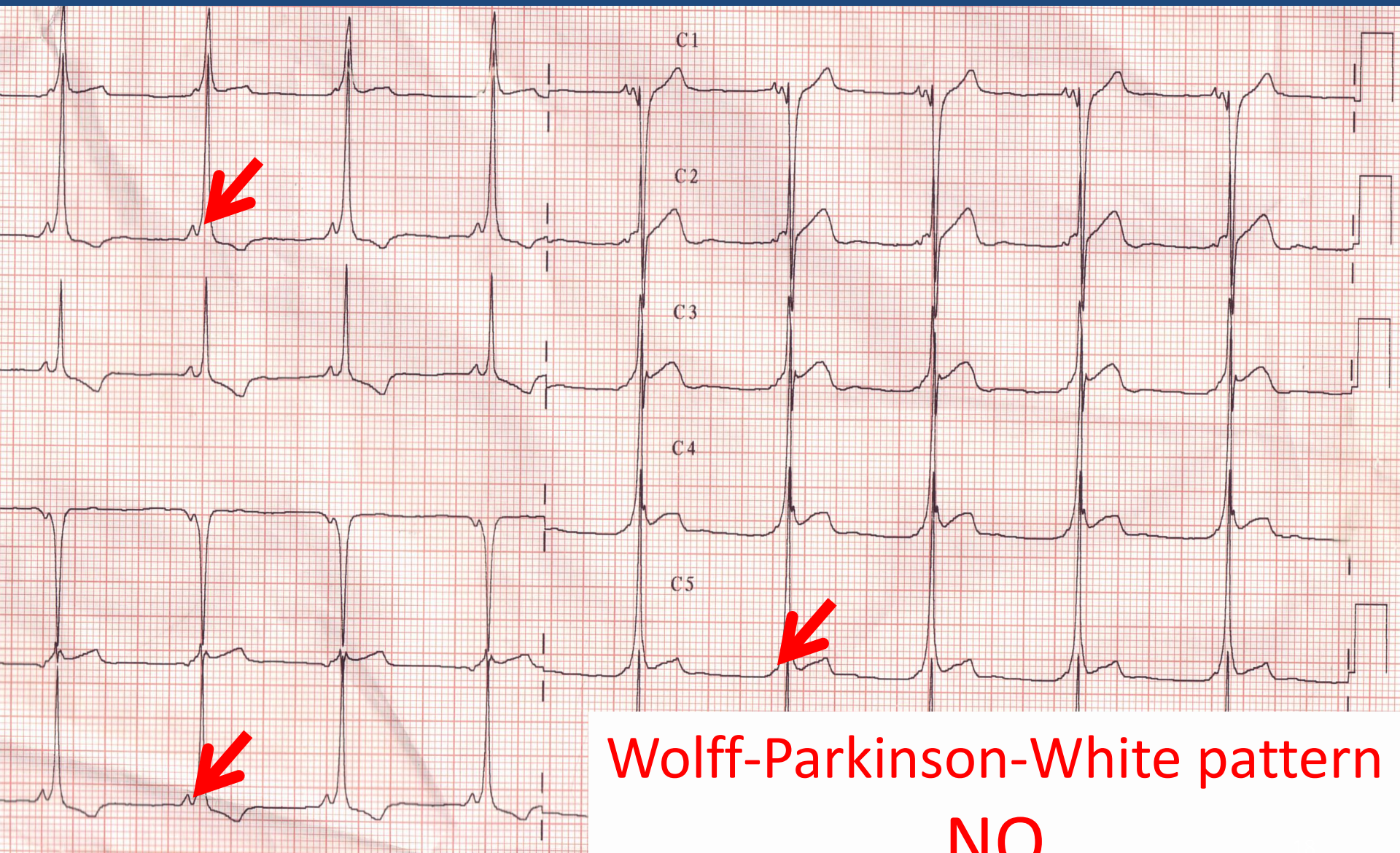
CASE 7 : MALE GOLF PLAYER 42 YEARS OLD



CASE 8 : MALE RUGBY PLAYER 23 YEARS OLD



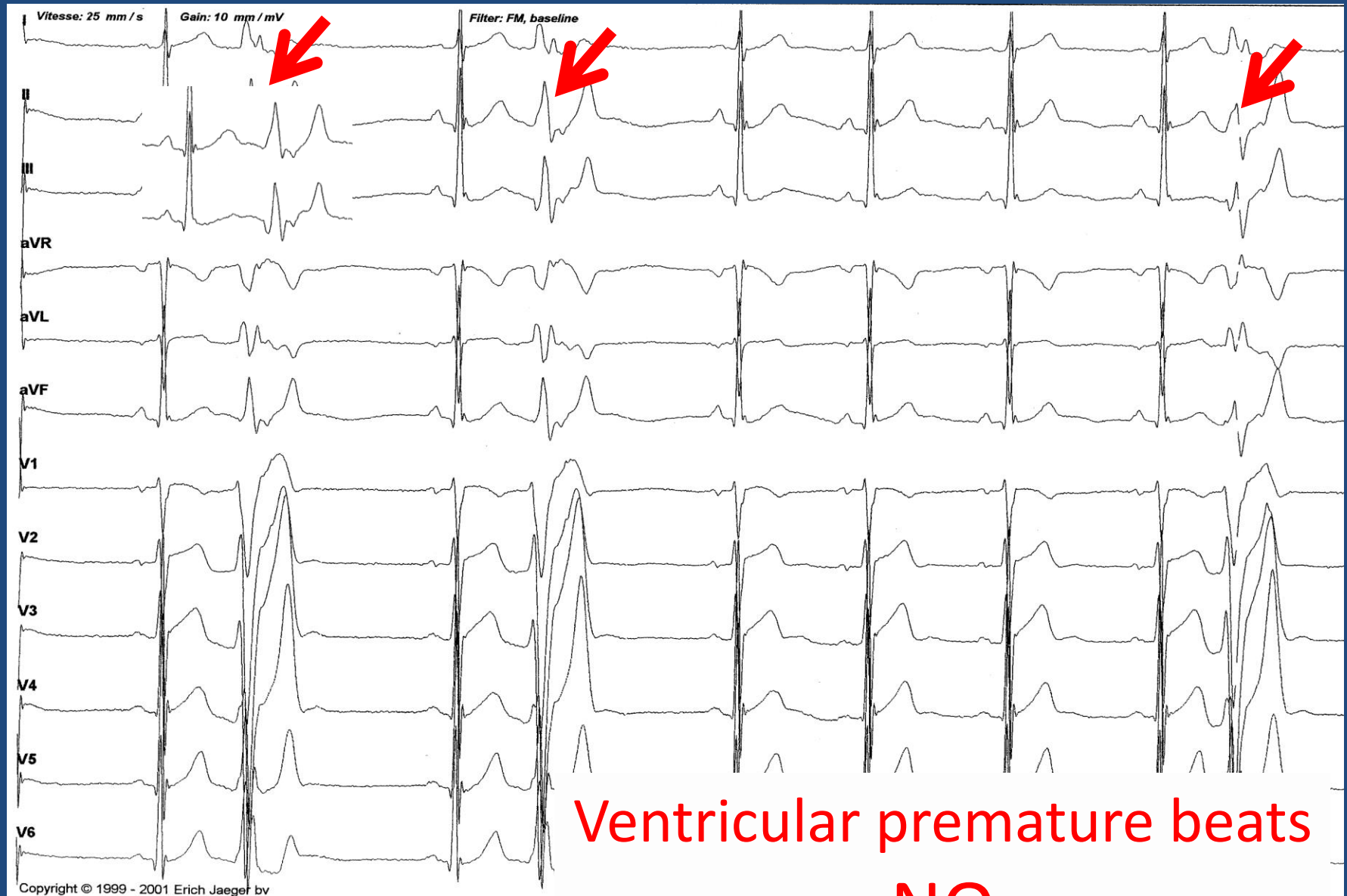
CASE 8 : MALE RUGBY PLAYER 23 YEARS OLD



CASE 8 : FEMALE HANDBALL PLAYER 22 YEARS OLD



CASE 8 : FEMALE HANDBALL PLAYER 22 YEARS OLD



Ventricular premature beats
NO

CV= cardiovascular
 LVH Left ventricle hypertrophy
 RVH Right ventricle hypertrophy
 RBB Right bundle branch block
 LBB left bundle branch block
 AVB Atrioventricular block
 LQT Long QT
 SQT Short QT

Cardiovascular Preparticipation Evaluation
 History and physical exam,
NO ABNORMALITY

Resting 12 leads-ECG

Normal

Training related changes

Training unrelated changes

Sinus bradycardia ≥ 30 bpm
 Sinus arrhythmia, isolated SV PB
 AVB 1 or 2 with LW period
 Incomplete RBBB
 Isolated LVH or RVH
 Early repolarisation syndrome
 T waves < 0 V1, V2, V3 if < 16 y.o.

Complete RBB
 Axis deviation
 Left atria enlargement

Bradycardia < 30 bpm
 Arrhythmias
 PR > 400 ms, AVB 2 (mobitz 2)
 AVB 3
 Preexcitation wave (WPW)
 Complete LBBB
 Pathological Q wave
 ST segment-depression
 Negative T wave
 LQT-SQT-Brugada
 Epsilon wave

1 feature

> 1 feature

Cardiovascular clearance
for intensive sport

Adapted cardiovascular exams
Temporary or definitive disqualification for intensive sport