



ECG med 442 NCR & WCT

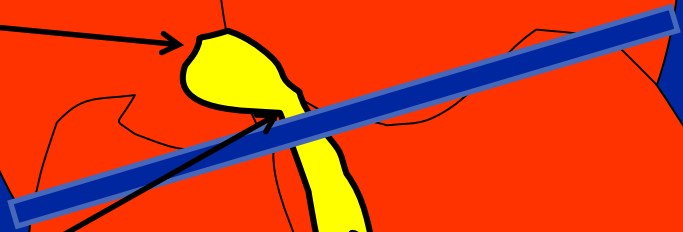
Dr. Ahmad S. Hersi,

SA

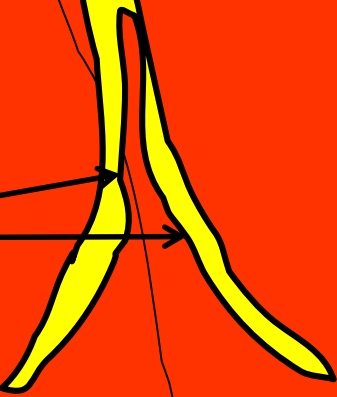


SVT

AV node



His bundle



VT

Bundle branches



- Sinus tachycardia
- SA nodal reentry tachycardia
- Atrial tachycardia /PAT/MAT
- Atrial flutter
- Atrial fibrillation
- AVNRT (AV nodal reentrant tachycardia)
- AVRT (AV reentrant tachycardia)
- Junctional tachycardia

Sinus
beat

"Delta" Wave

Hybrid
QRS shape

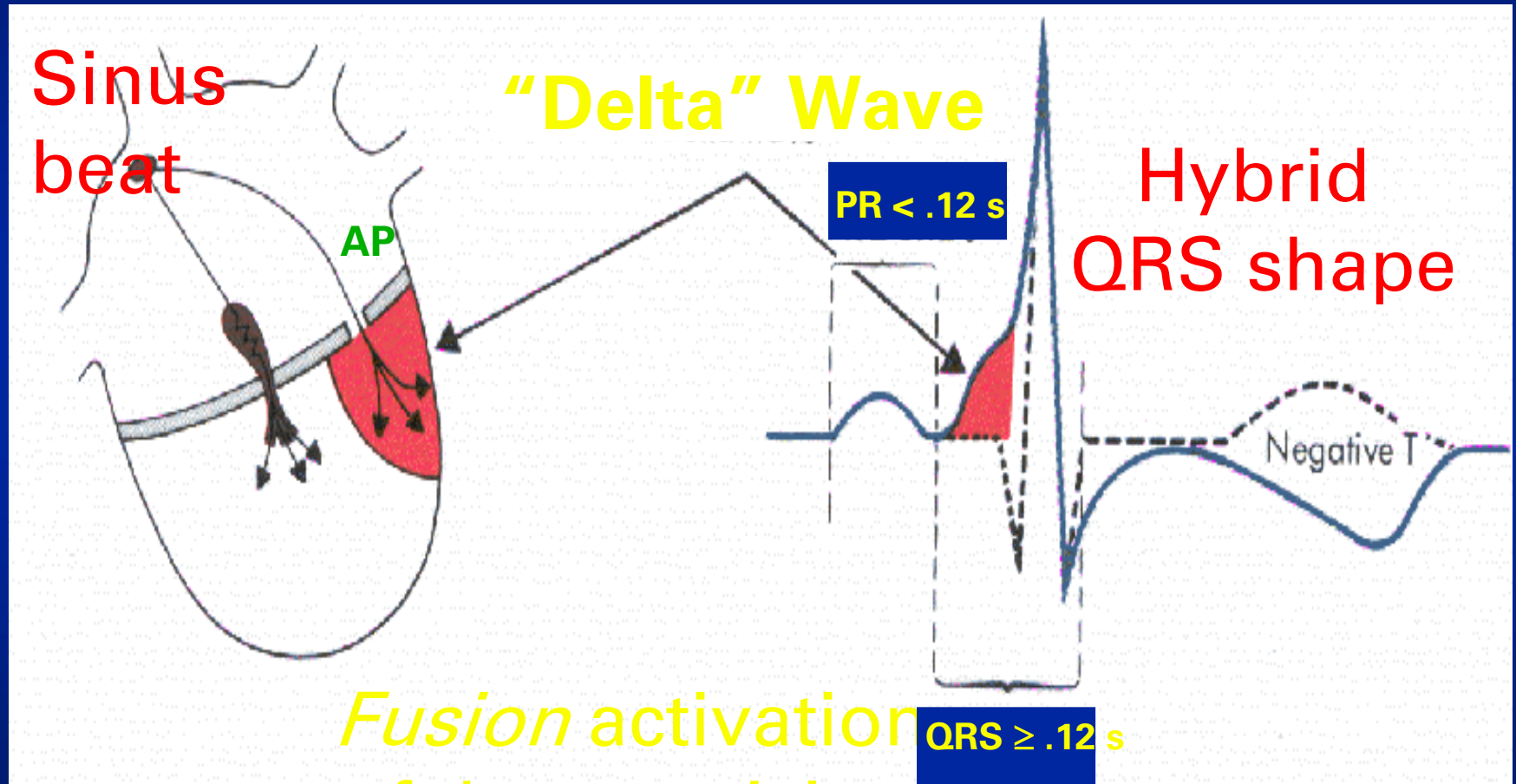
AP

PR < .12 s

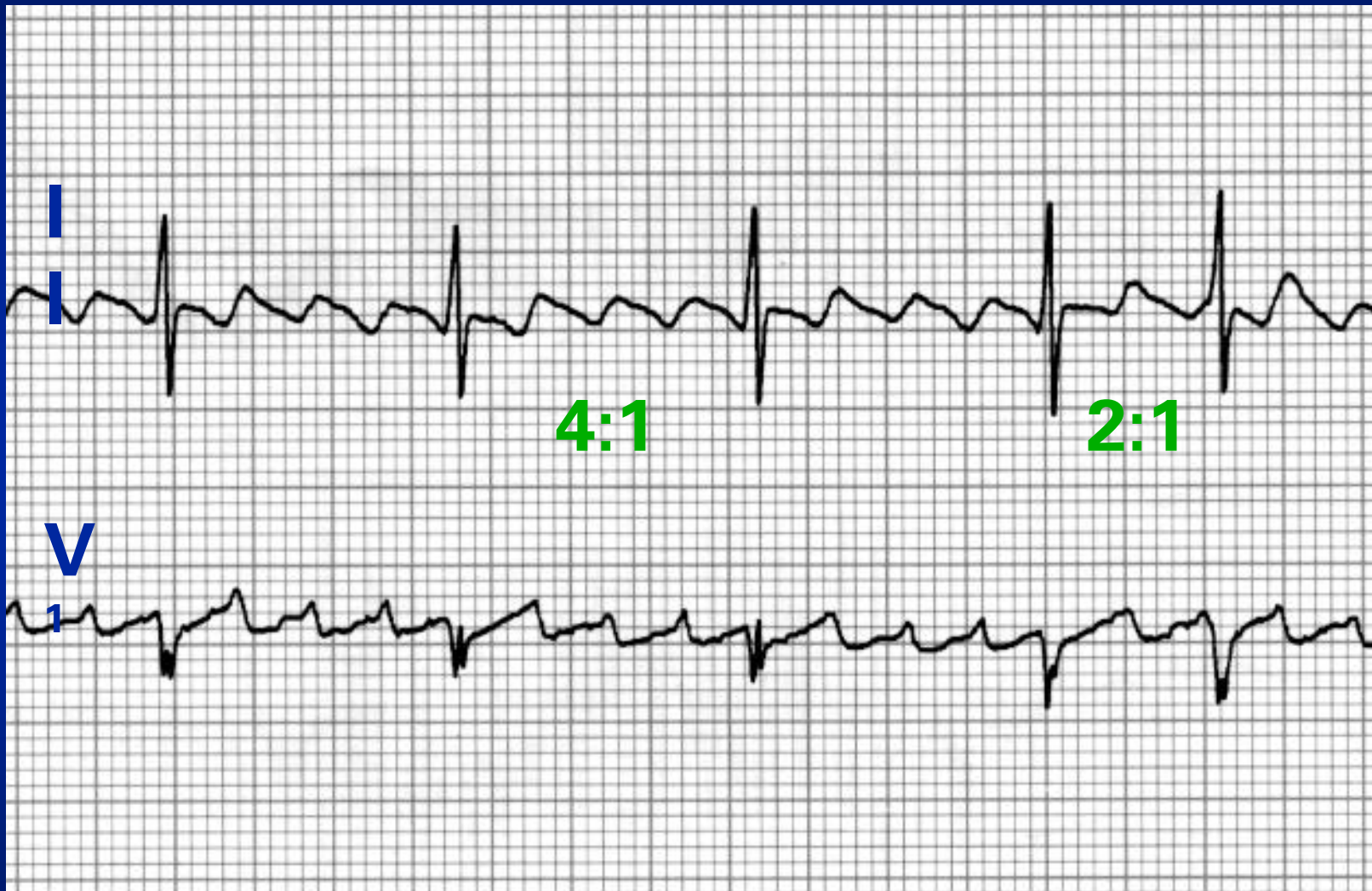
Negative T

Fusion activation
of the ventricles

QRS ≥ .12 s



Atrial Flutter







What is *your* management?

Management

Narrow Complex tachycardia

Serious signs and symptoms



Immediate Cardioversion

Stable clinically



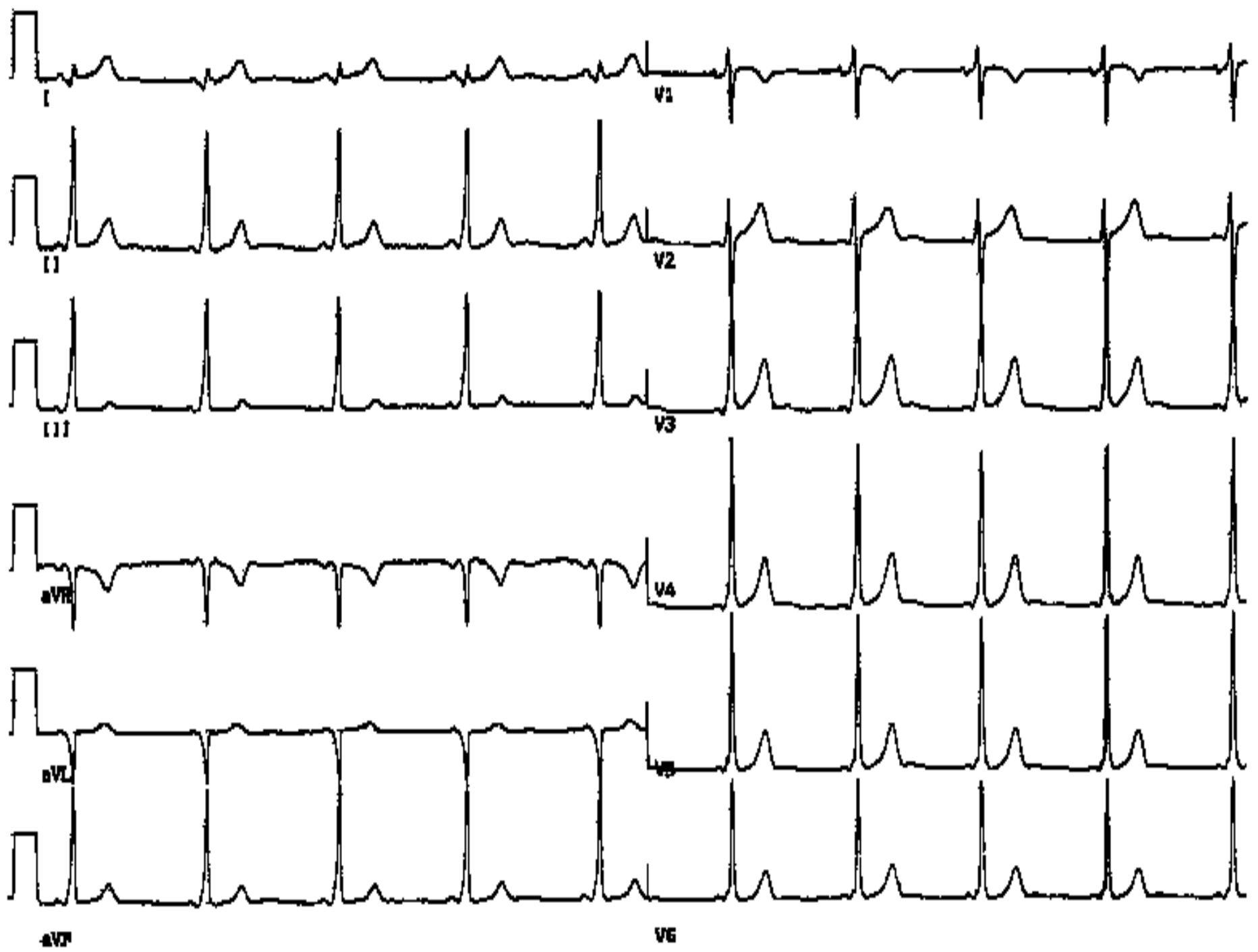
Vagal maneuvers



Adenosine or Verapamil

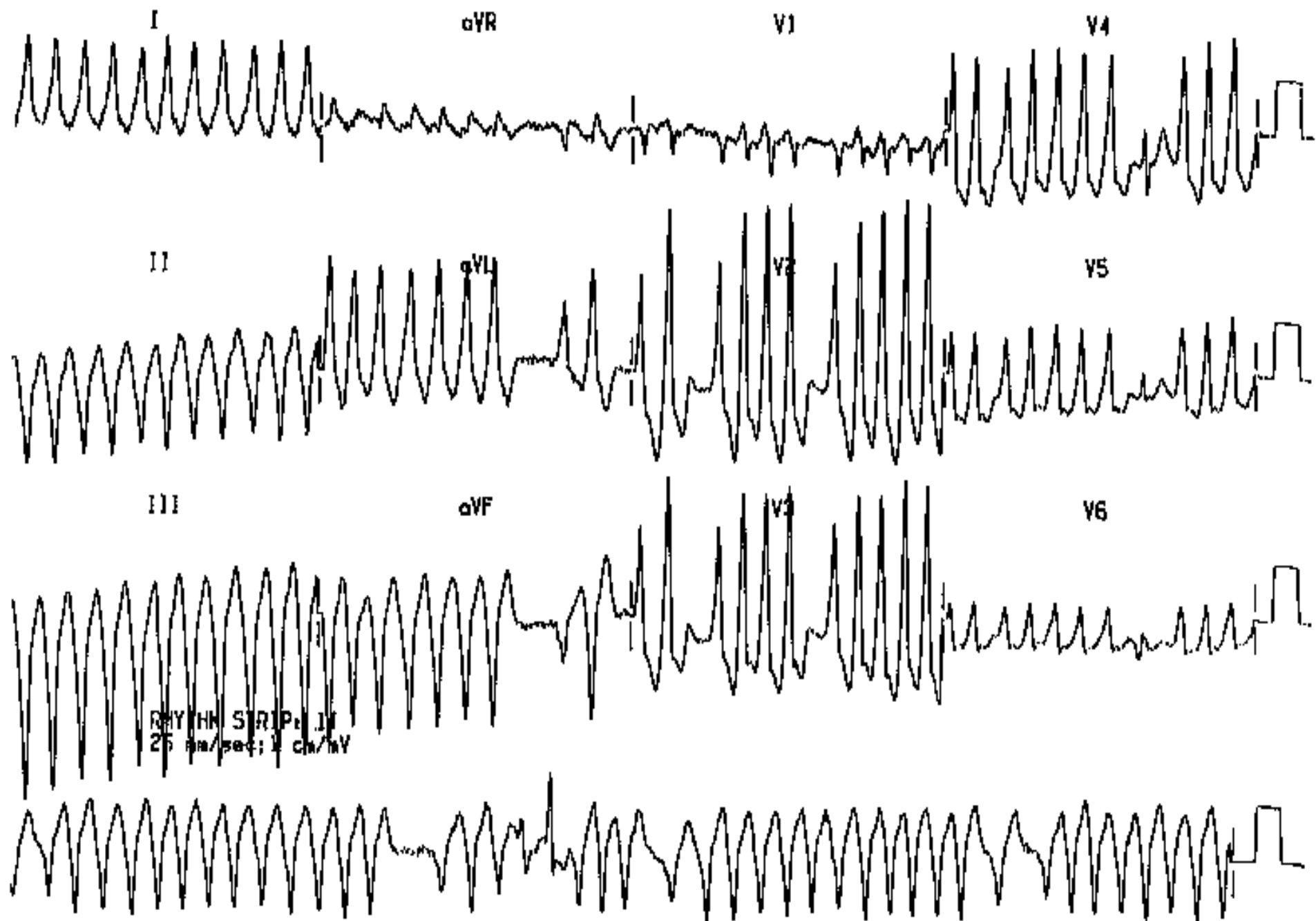


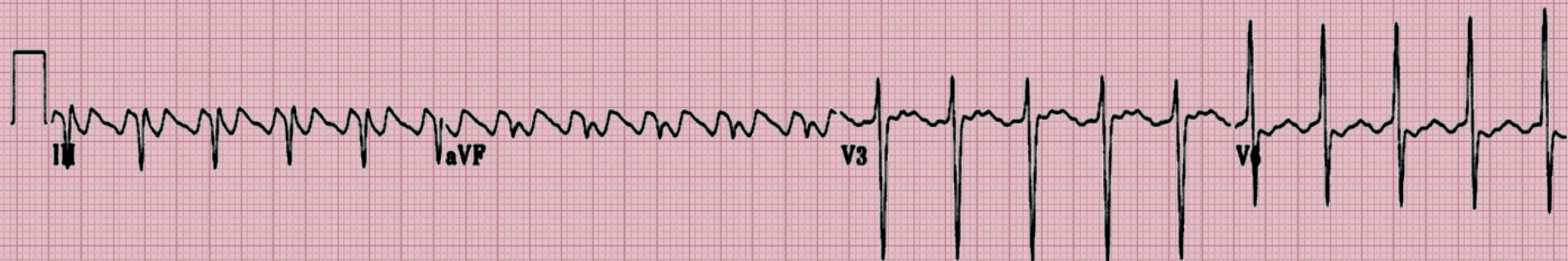
Consider BB, Diltiazem, or Digoxin

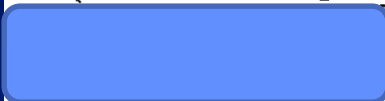


WPW

- **Short PR interval, less than 3 small squares (120 ms)**
- **Slurred upstroke to the QRS indicating pre-excitation (delta wave)**
- **Broad QRS**
- **Secondary ST and T wave changes**
- **An accessory pathway, bundle of Kent, exists between atria and ventricles and causes early depolarisation of the ventricle.**







, ASSUMED TO BE 50 YEARS OLD FOR PURPOSE OF ECG INTERPRETATION
N, V-RATE 119-165.....var'd rate, irreg atrial activity
H BLOCK.....QRSϕ120, terminal axis(90,270)
CUTE.....ST >.20mV, q >35ms, I aVL V5 V



QT 368
QTc 574

--AXIS--
P
QRS 140
T -29

*AS 3/11
4/23/11*

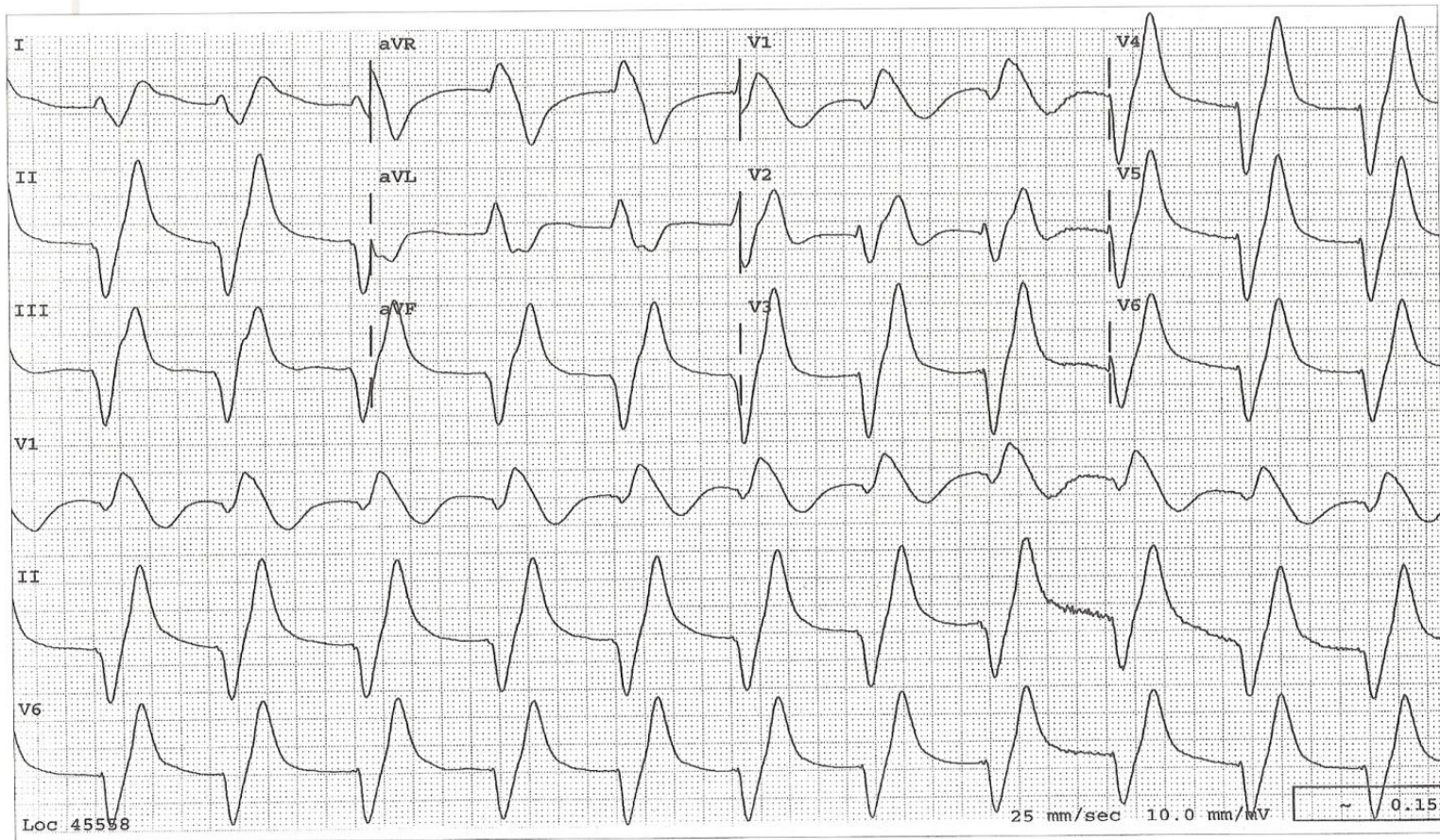


- ABNORMAL ECG -

Unconfirmed Diagnosis



ECG VIII-15



WCT

- It has to be wide : QRS complex >0.12
- It has to be fast: HR >100

Step # 1 determine if the patient is stable

- 1- Hemodynamically unstable: ACLS protocol
- 2- Hemodynamically stable: Go to step#2

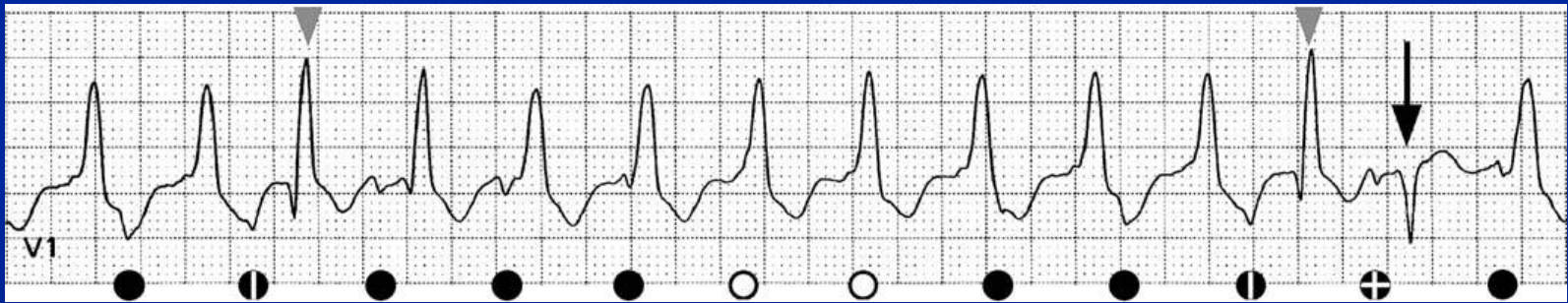
Step#2 Is this VT or others

- DDX for WCT :
- 1- VT 70%- 80%
- 2- SVT with abberation
- 3- AF with BBB
- 4- AF with WPW
- 5- Paced rhythm
- 6- Sinus tachycardia with BBB

Step #3 EKG criteria

- 1-QRS duration
- 2-QRS axis
- 3-QRS concordance
- 4-AV dissociation
- 5-Fusion and capture beat
- 6-Specific pattern in V1
- 7-Absent RS in precordial leads

- Fusion and capture complexes:



WCT Causes:

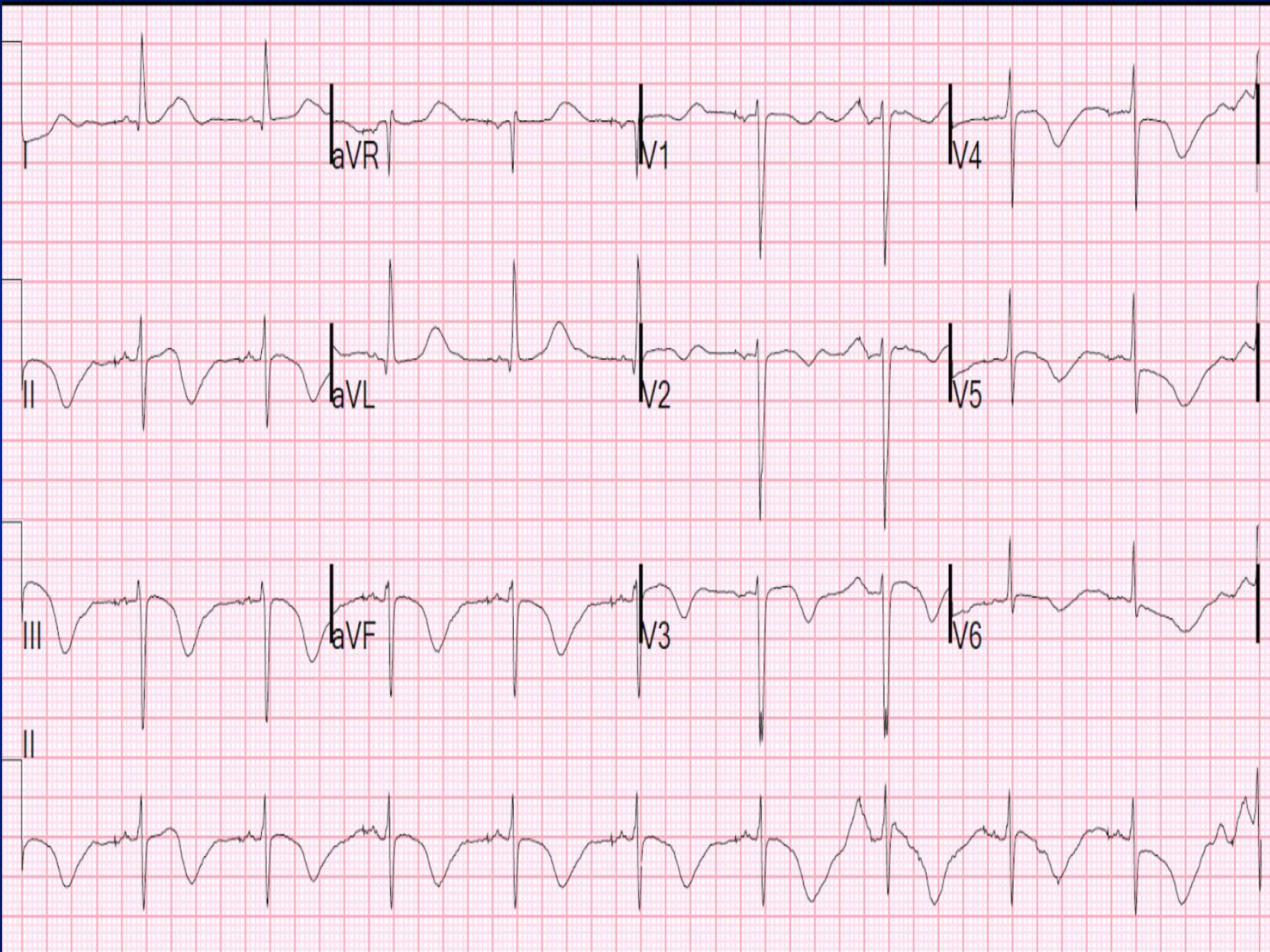
1-Cardiomyopathy (Ischemic HD/DCM)

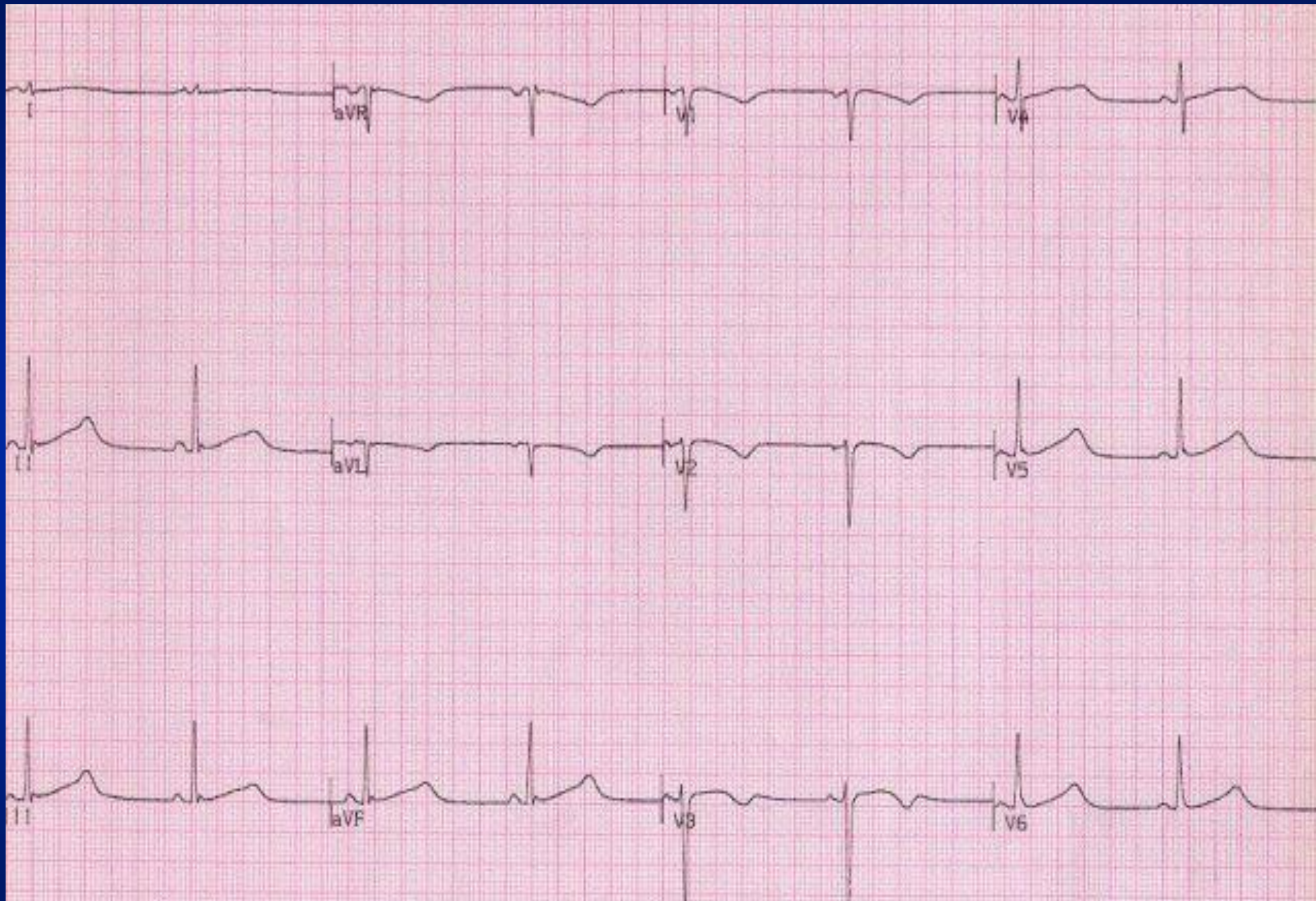
2-Idiopathic VT

3-Inherited arrhythmias

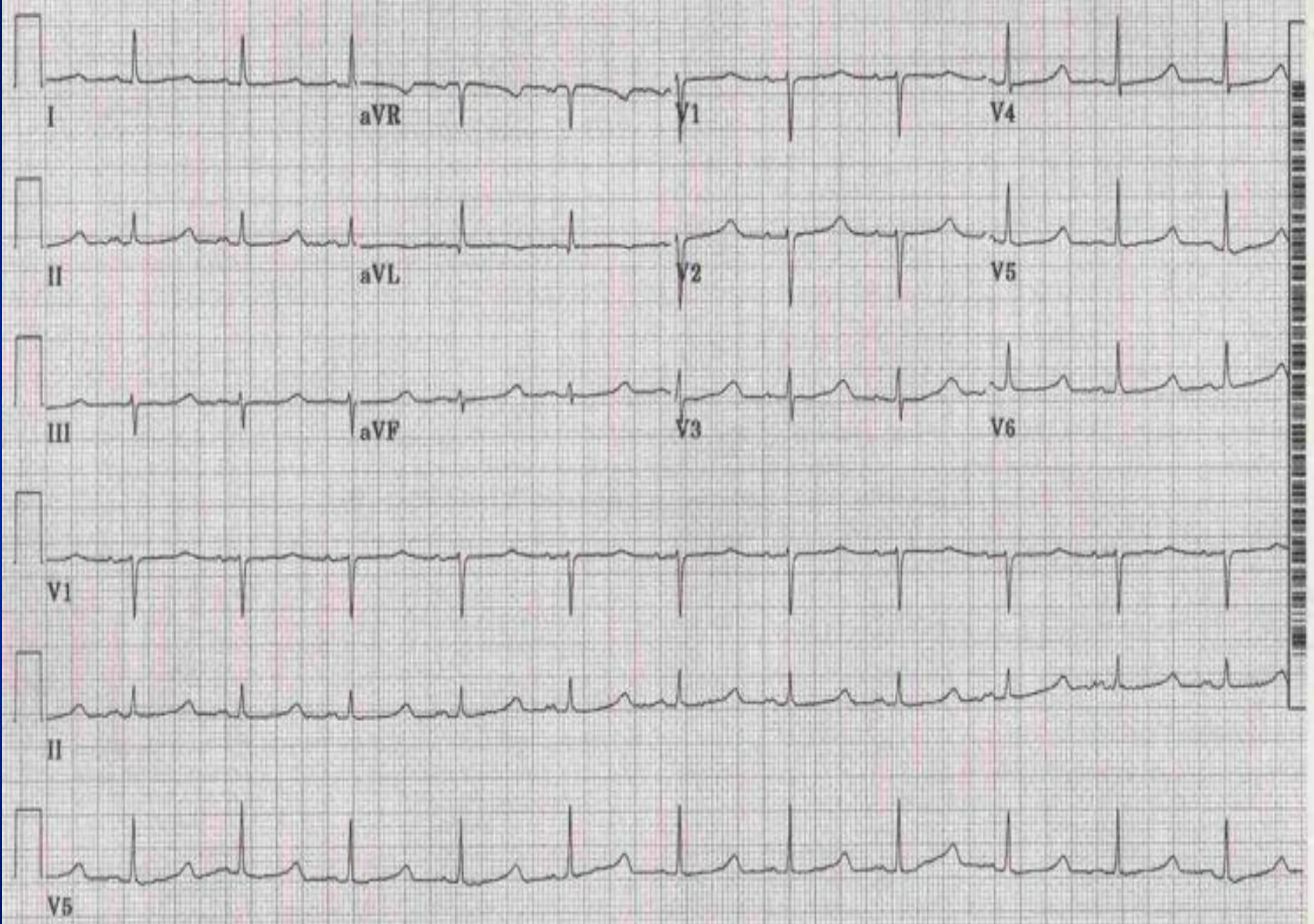
Inherited Arrhythmias

- Long QT
- Short QT
- Brugada Syndrome
- Catecholamine Polymorphic VT
- Arrhythmogenic Right Ventricular Dysplasia (ARVD)
- Hypertrophic Cardiomyopathy



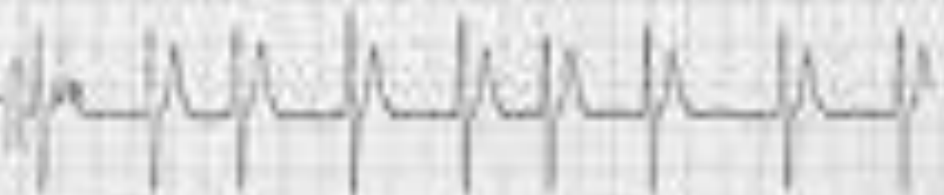
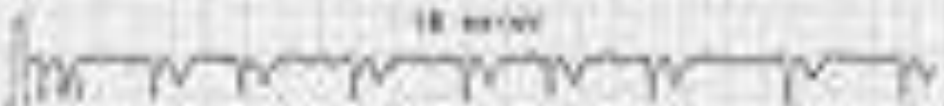


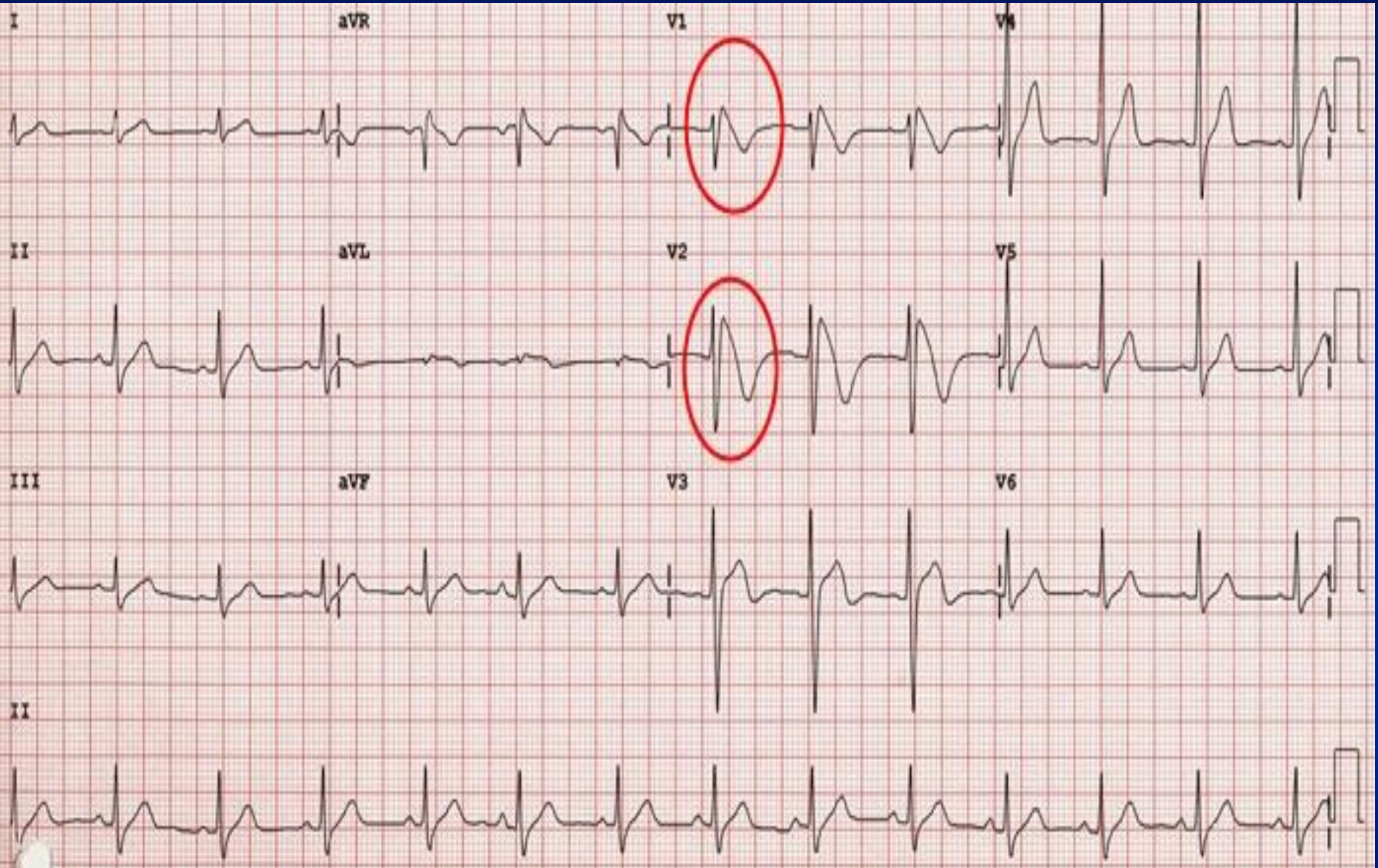
R- H- S+ P+ 60 5fa3 H462 #701 CASE 006C



18 series

18 series





Dev: EMT0167

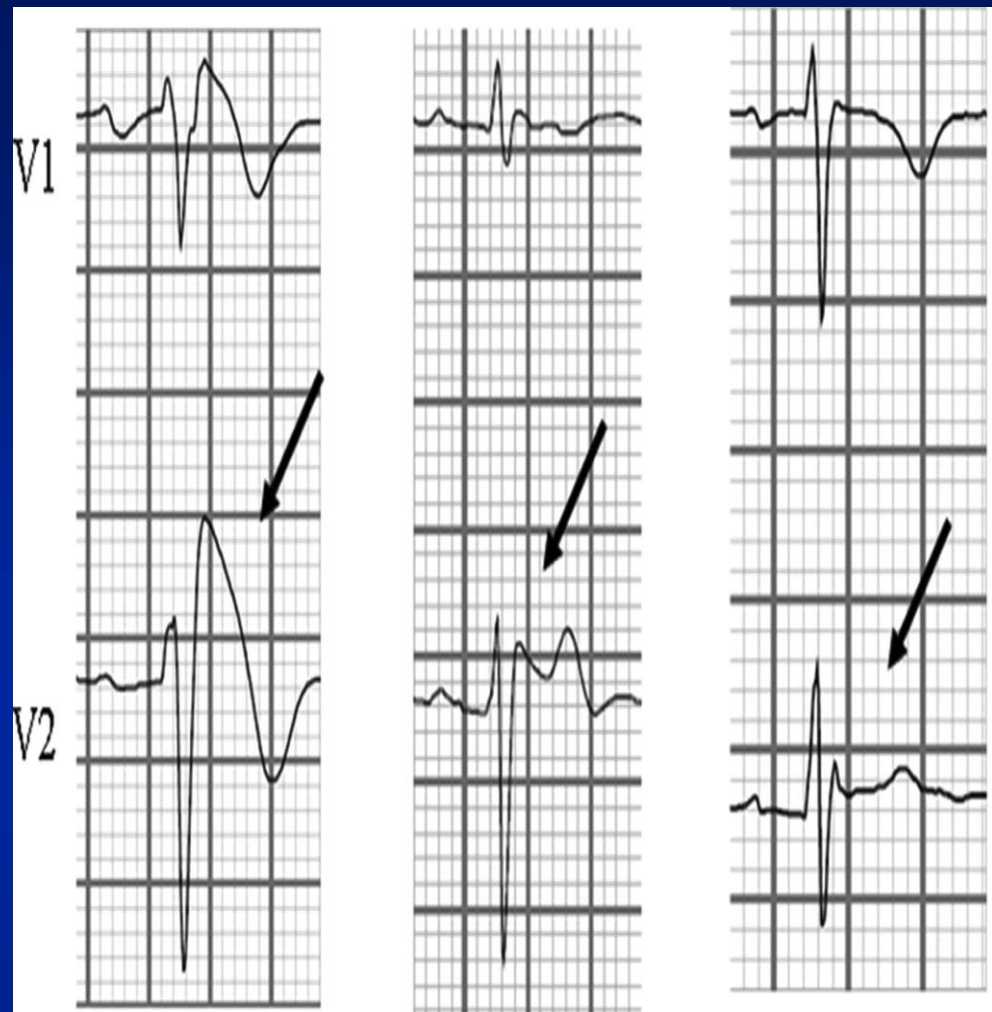
Speed: 25 mm/sec Limb: 10 mm/mV Chest: 10 mm/mV

F 50- 0.5- 40 Hz W

PH08 P?

DWILDS

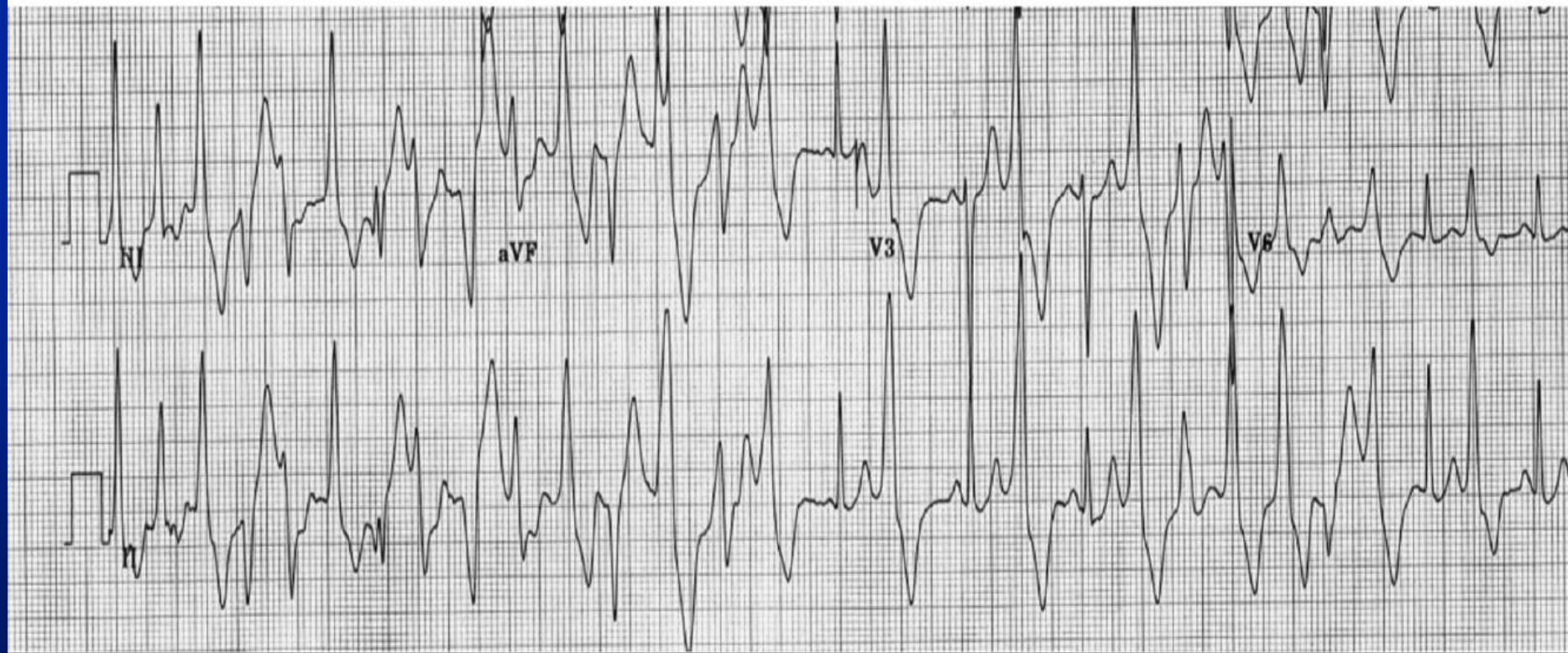
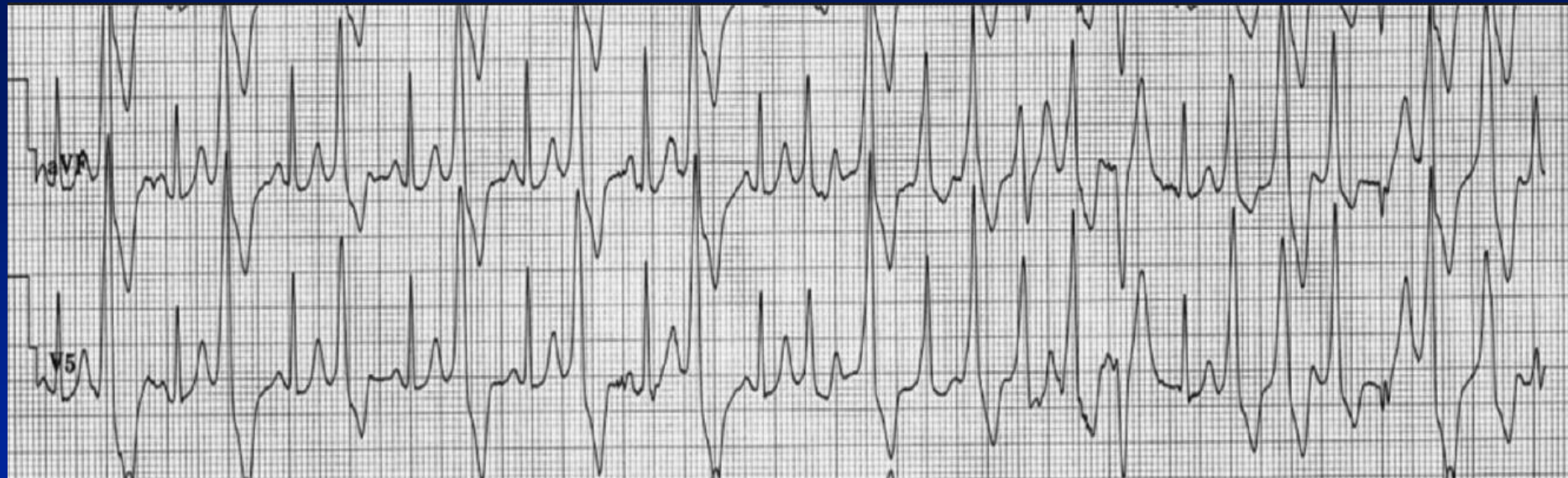
- **Type 1 (DIAGNOSTIC)**
 - Coved ST elevation $\geq 2\text{mm}$ with negative T wave
 - \uparrow sensitivity by moving V2/V3 from 4th to 2nd/3rd intercostal space
- **Type 2**
 - Saddleback ST elevation $\geq 2\text{mm}$ w/ ST trough $\geq 1\text{mm}$
 - Positive/biphasic T wave
- **Type 3**
 - Coved/saddle ST elevation $\geq 2\text{mm}$ w/ ST trough $< 1\text{mm}$
- **Also reported in inferior leads and left precordial leads**
 - Some individuals also had SCN5A mutation

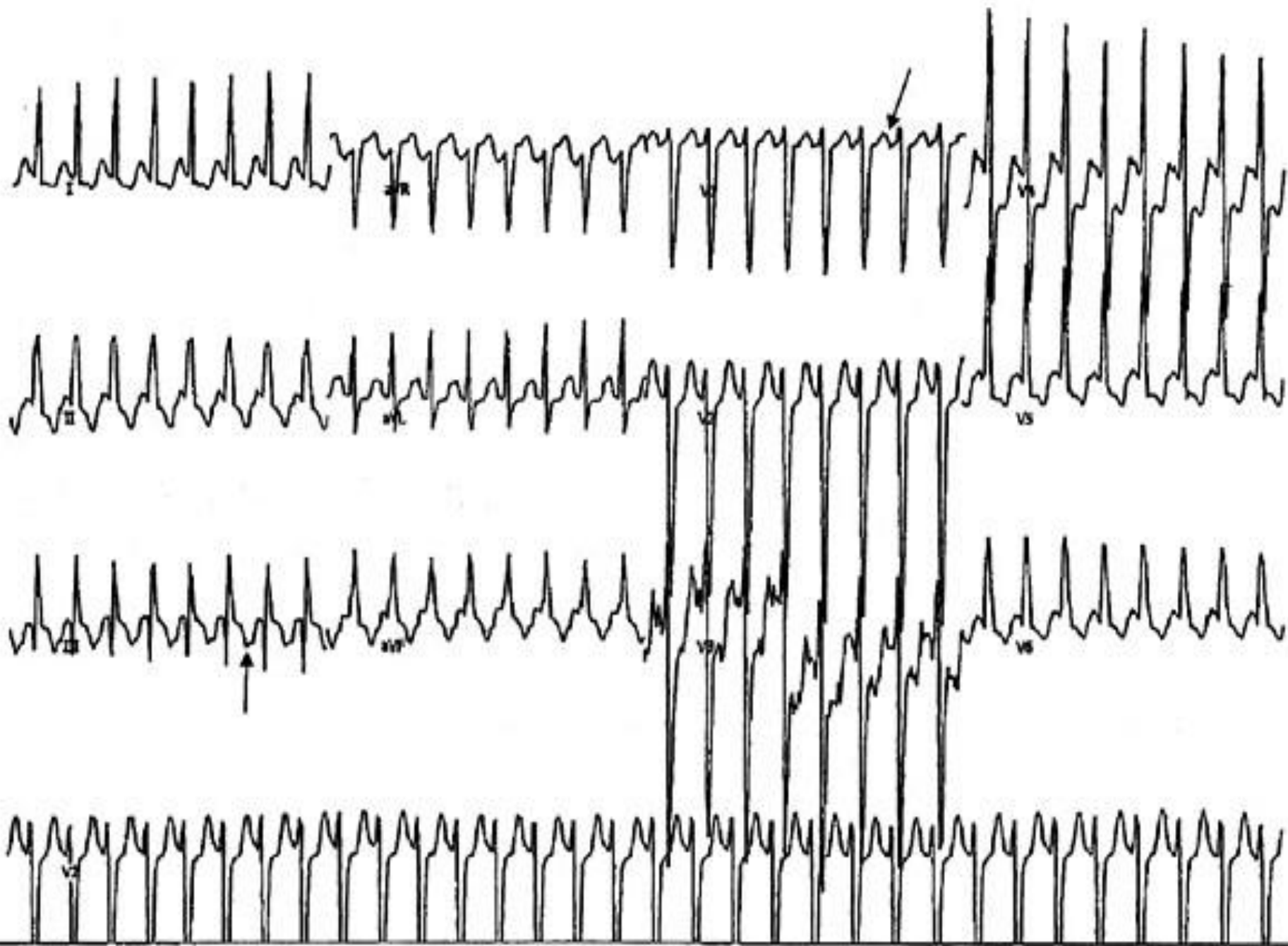


Type 1:
Coved type
ST-segment
elevation

Type 2:
saddle-back type
ST-segment
elevation

Type 3:
Saddle-back type
"ST-segment
elevation"





8/3/2011 12:32:35 AM

7

Rate 193 . AGE IS NOT ENTERED, ASSUMED TO BE 50 YEARS OLD FOR PURPOSE OF ECG INTERPRETATION
 PR 56 . ~~.....~~ V-rate > 99, QRSD > 120
 QRSD 136 . ~~.....~~ long R-R interval, normal QRSD
 QT 340 . ~~.....~~ QRSD > 110ms, not LBBB/RBBB
 QTc 610 DELAY

--AXIS--
 P 0
 QRS 90
 T 267

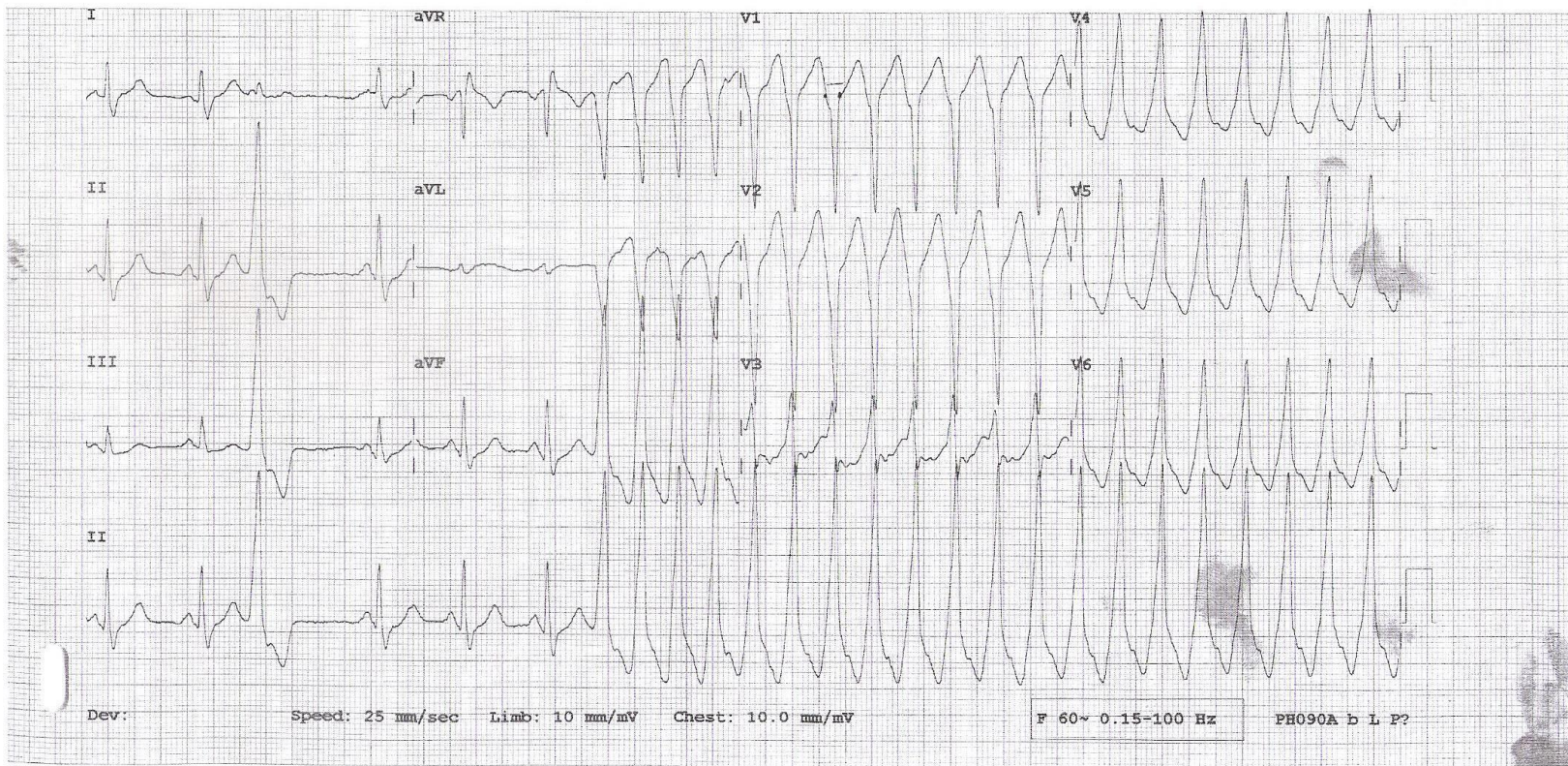
- ABNORMAL ECG -

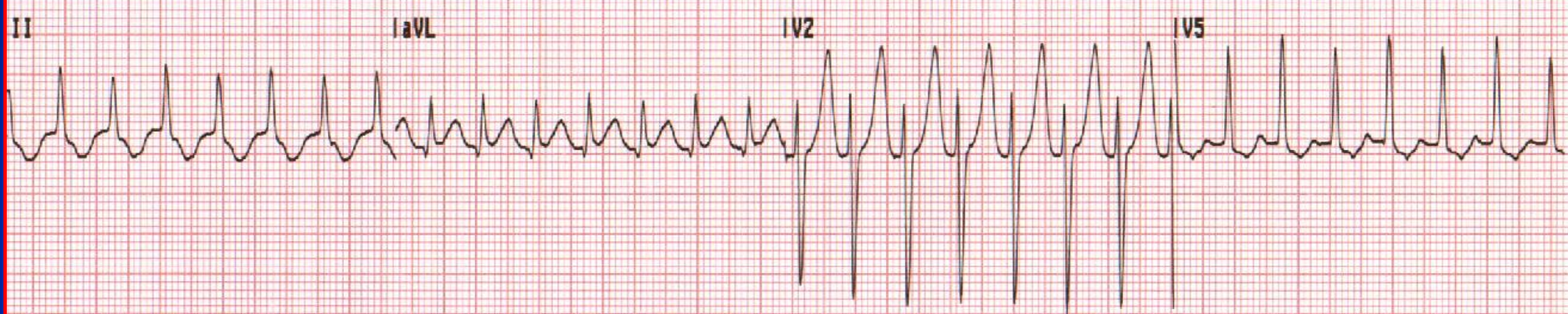
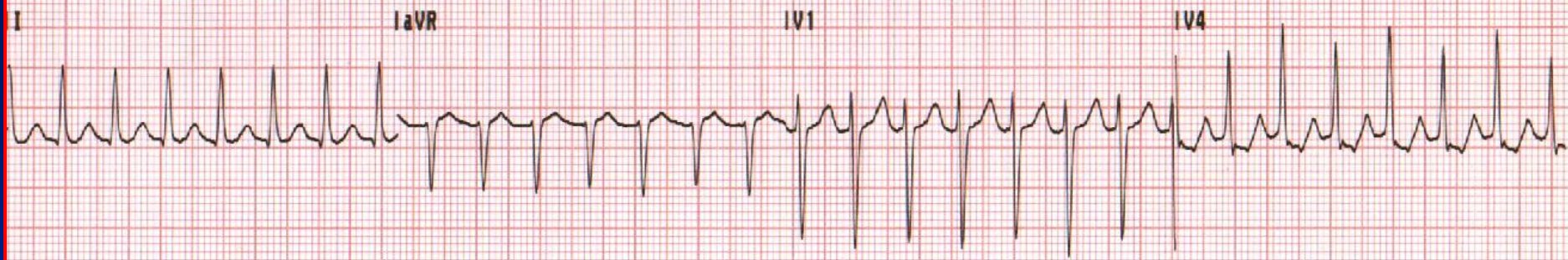
S/B Dr. Samee



* 9 8 5 2 4 1 *
 SHERIN SALAH SALEEM
 DOB: 27/08/1979 Sex: F
 Nationality EGYPTIAN

Unconfirmed





EXERCISE TEST / ECG Strips

8

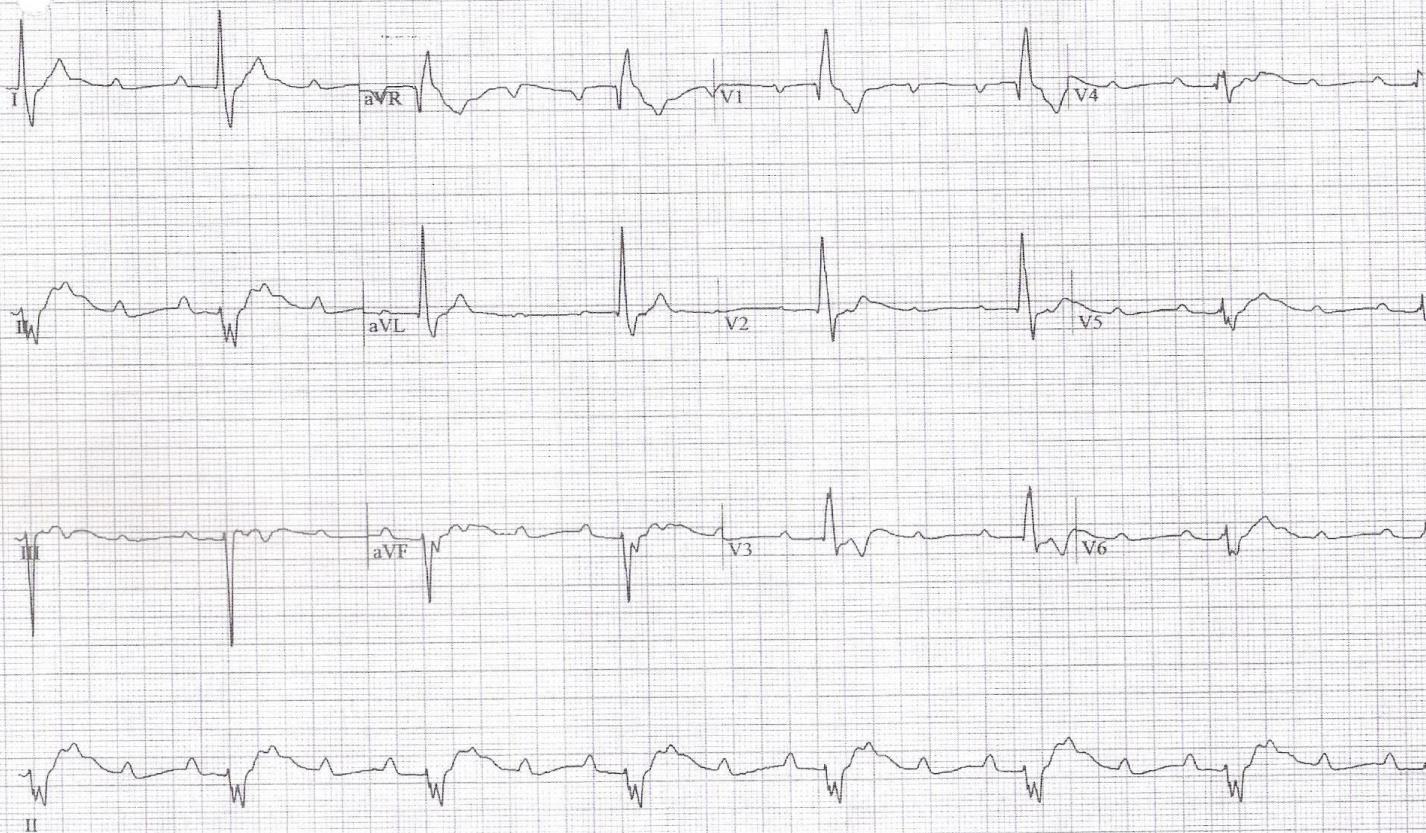
KKUH

74305
011
9:23

43 bpm
125/80 mmHg

RECOVERY
2:50

BRUCE
0.0 km/h
0.0 %



GE CASE V5.15 (0)
25mm/s 10mm/mV 60Hz 0.01Hz FRF+ HR(V2,V3)

Unconfirmed

Attending MD: Dr.Raed

Page 1

Premium

GE Medical Systems





25mm/s 10mm/mV 100Hz 003A-003B 12SL 110 CID: 1

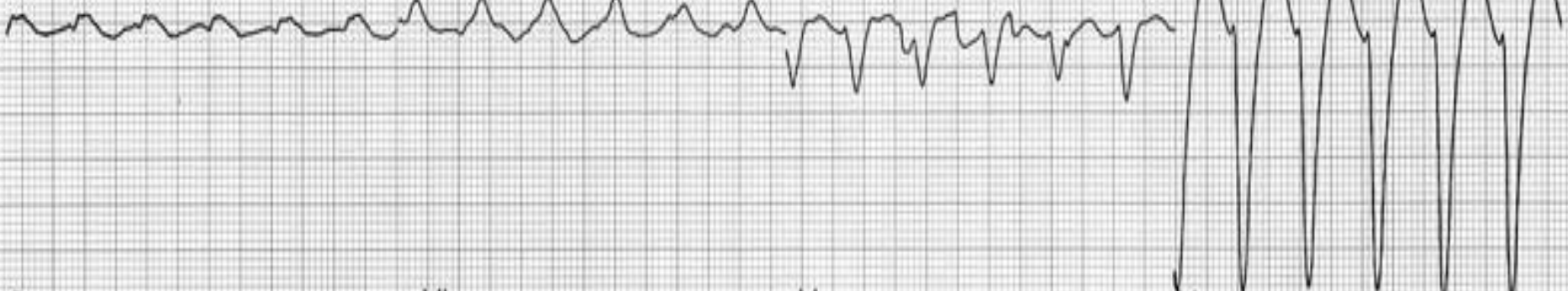
EID:Unconfirmed EDT: ORDER:

1

aVR

V₁

V₄



2

aVL

V₂

V₅



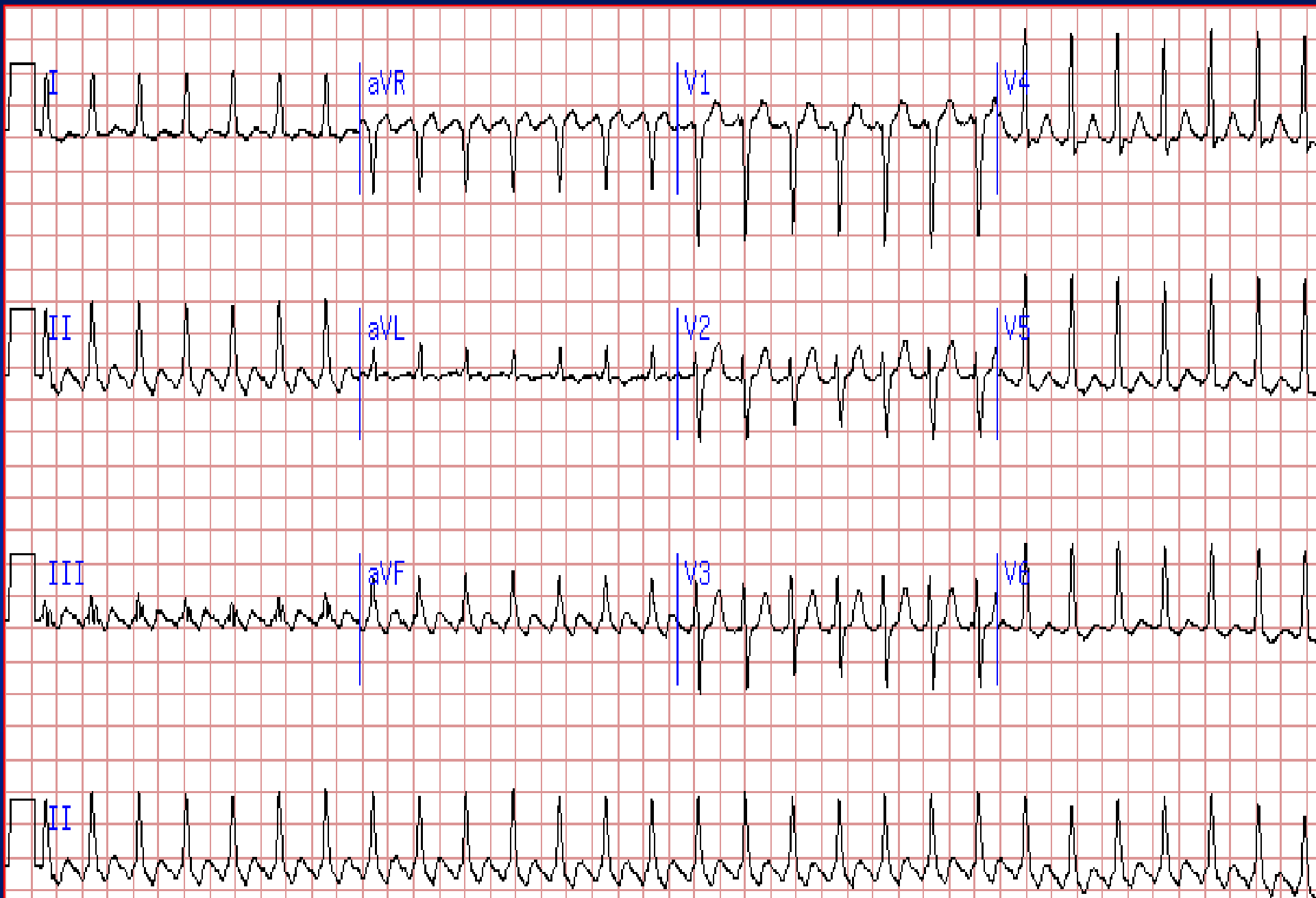
3

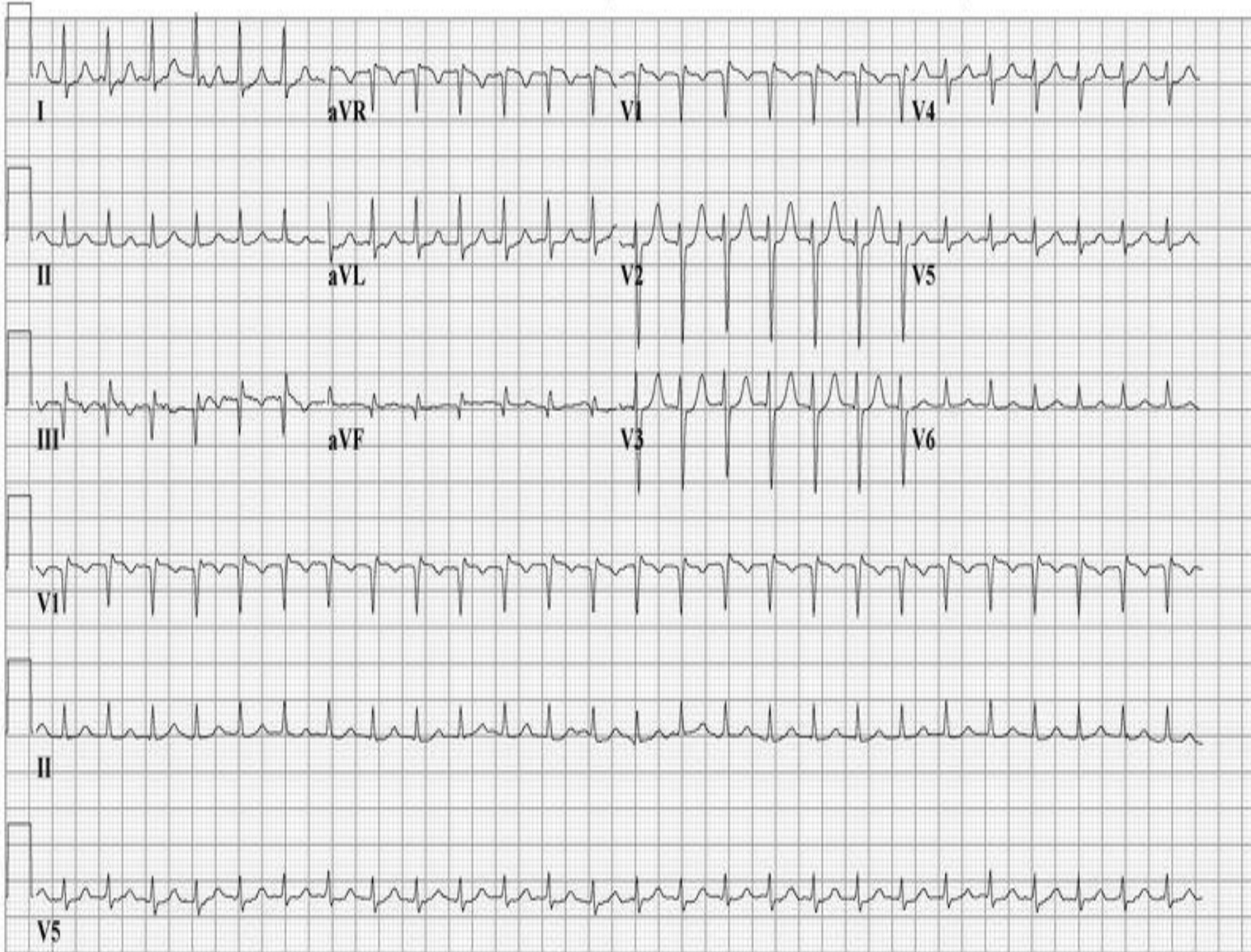
aVF

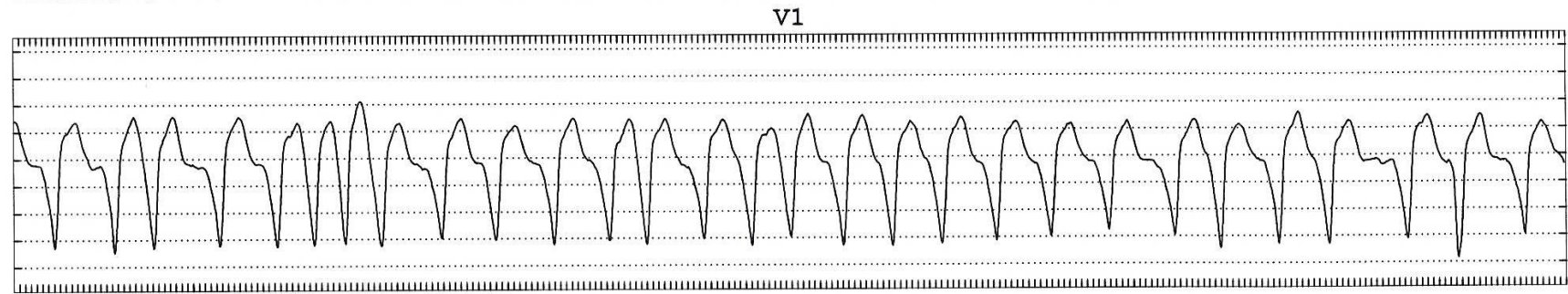
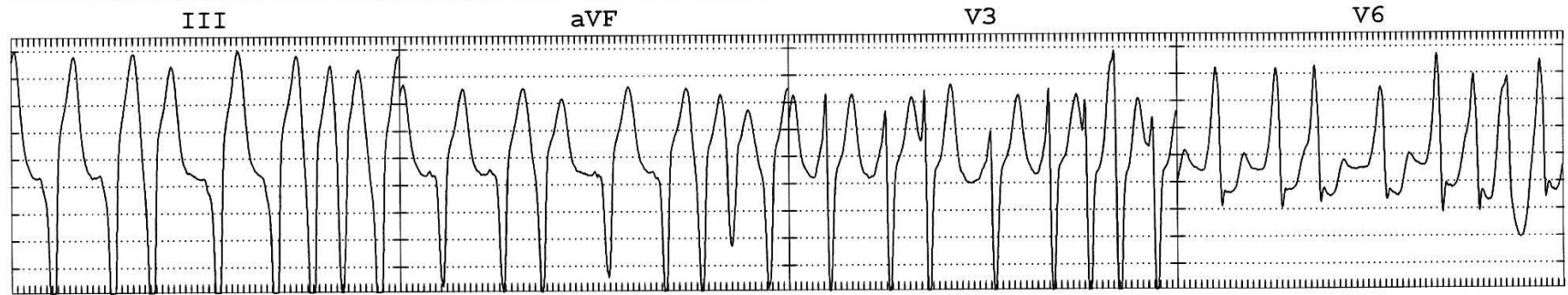
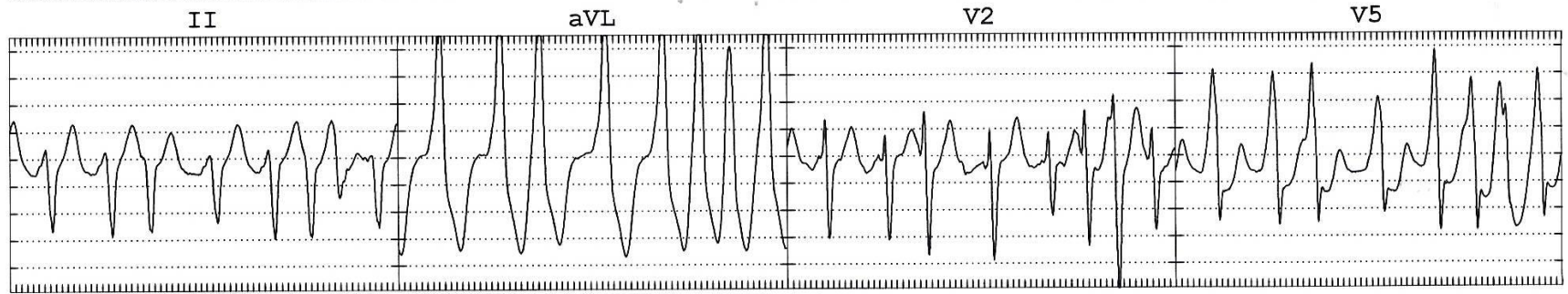
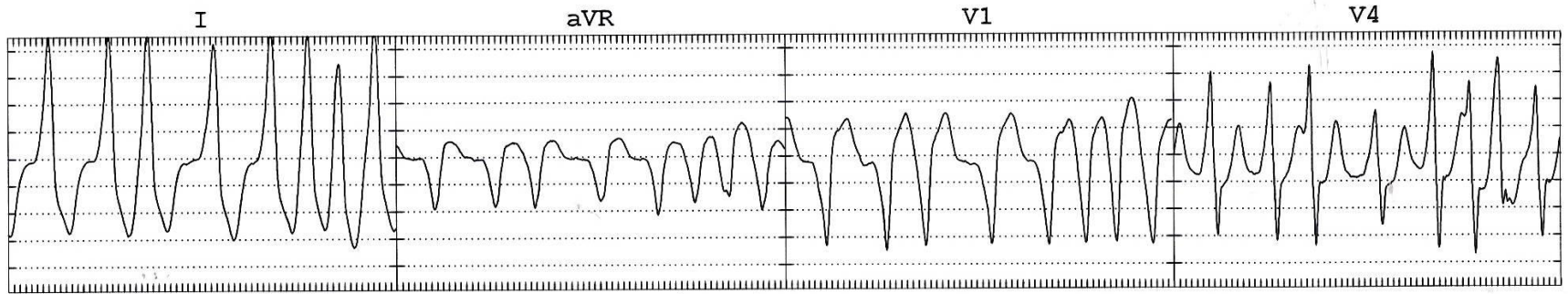
V₃

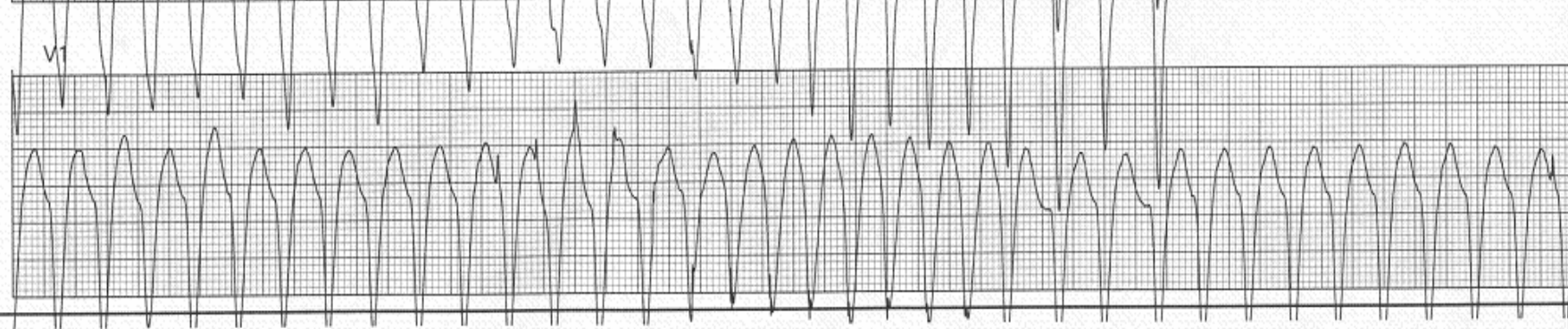
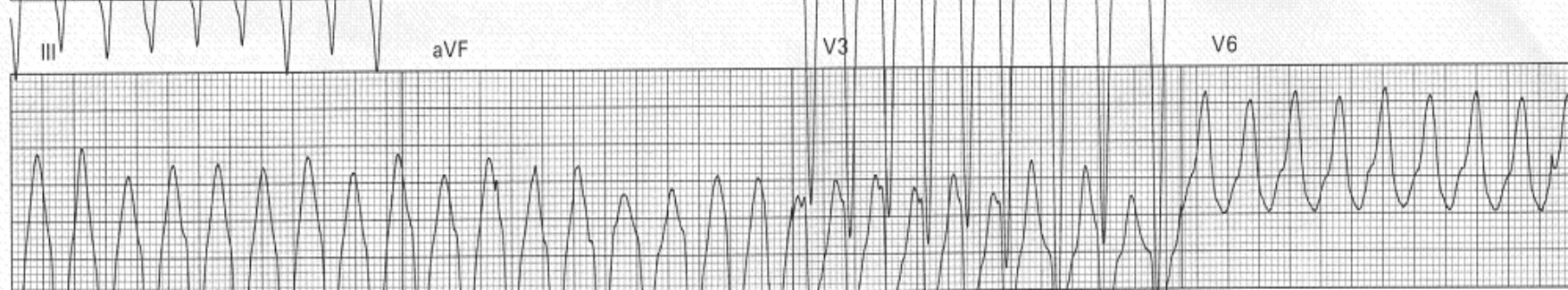
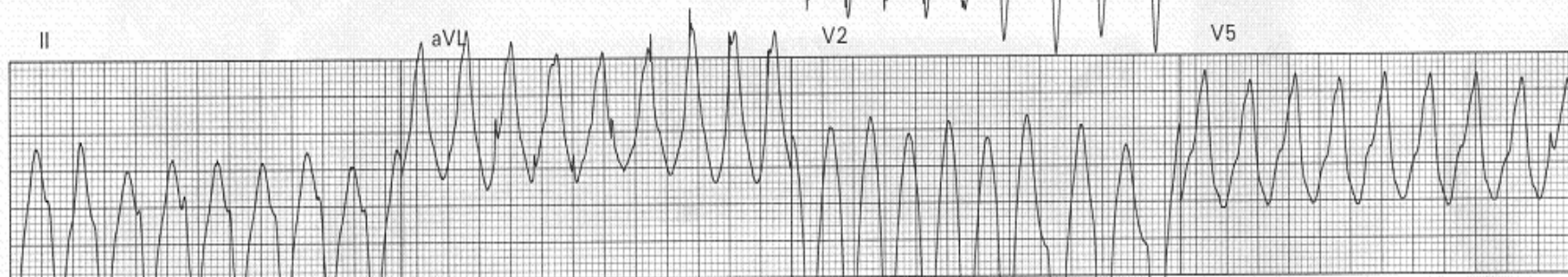
V₆



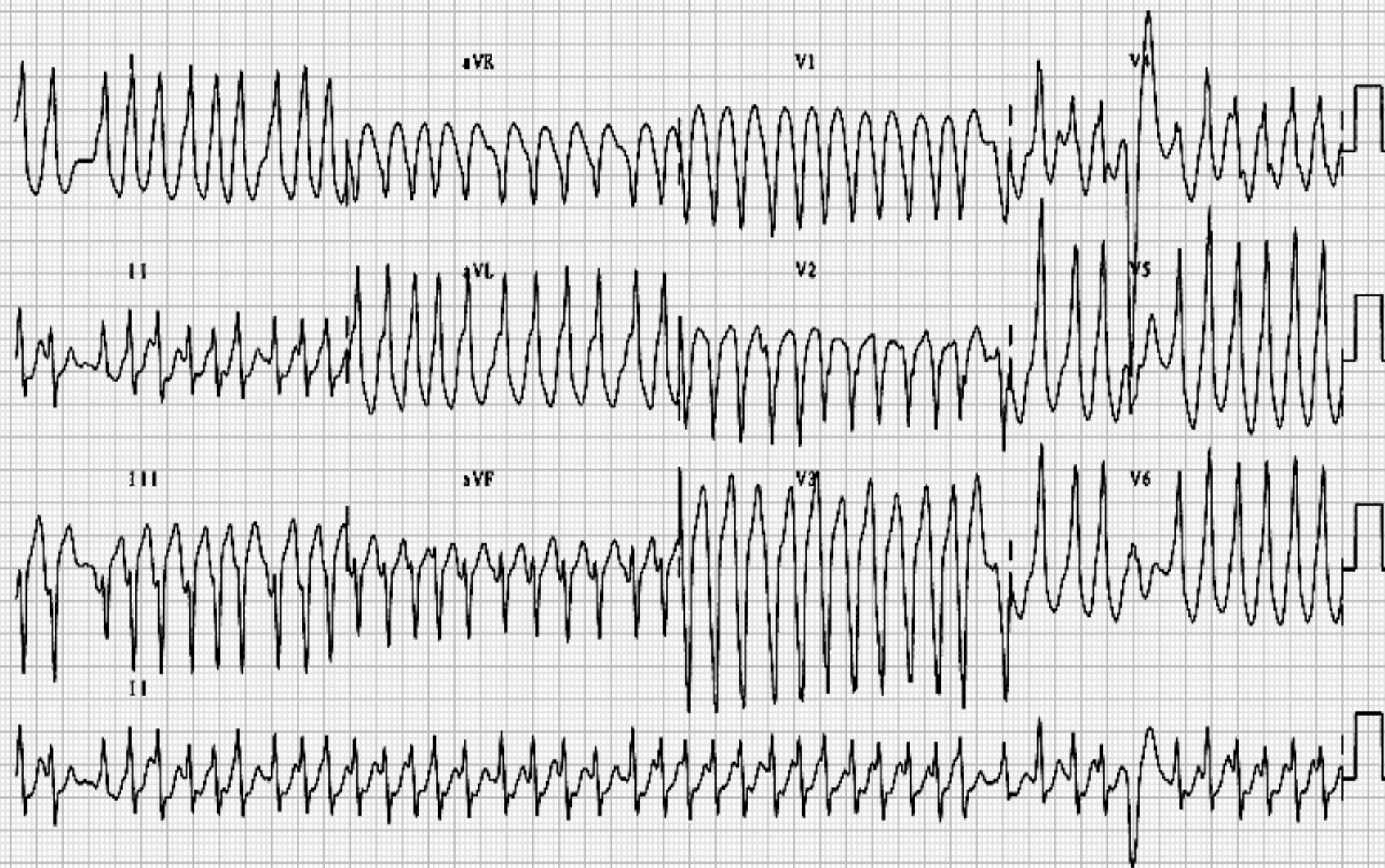








A 23 year old man with episodes of palpitations.



..... cm / kg

CARDIO/PCM

DR. AHMAD

PR - ms

QRS 138 ms

QT 378 ms

QTC 455 ms

P (II) - mV

S (Vf) - mV

R (V5) 0.37 mV

Sokol. 0.37 mV

KVA WITH REPOLARIZATION ABNORMALITY

QRS(T) CONTOUR ABNORMALITY

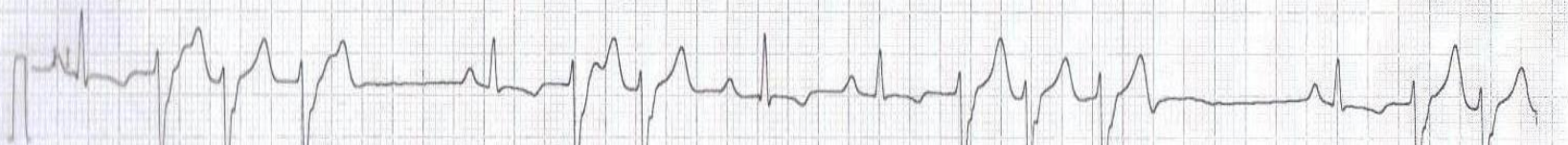
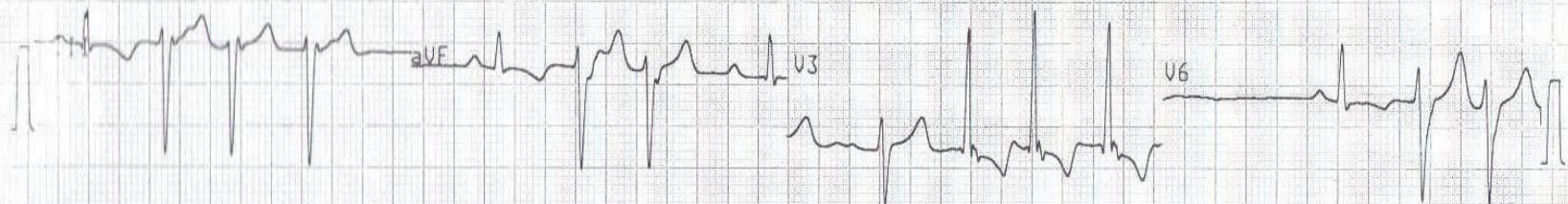
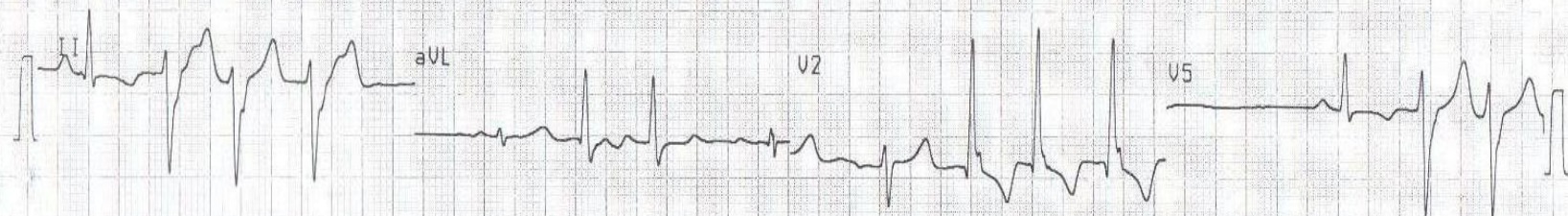
CONSIDER ANTEROSEPTAL MYOCARDIAL DAMAGE

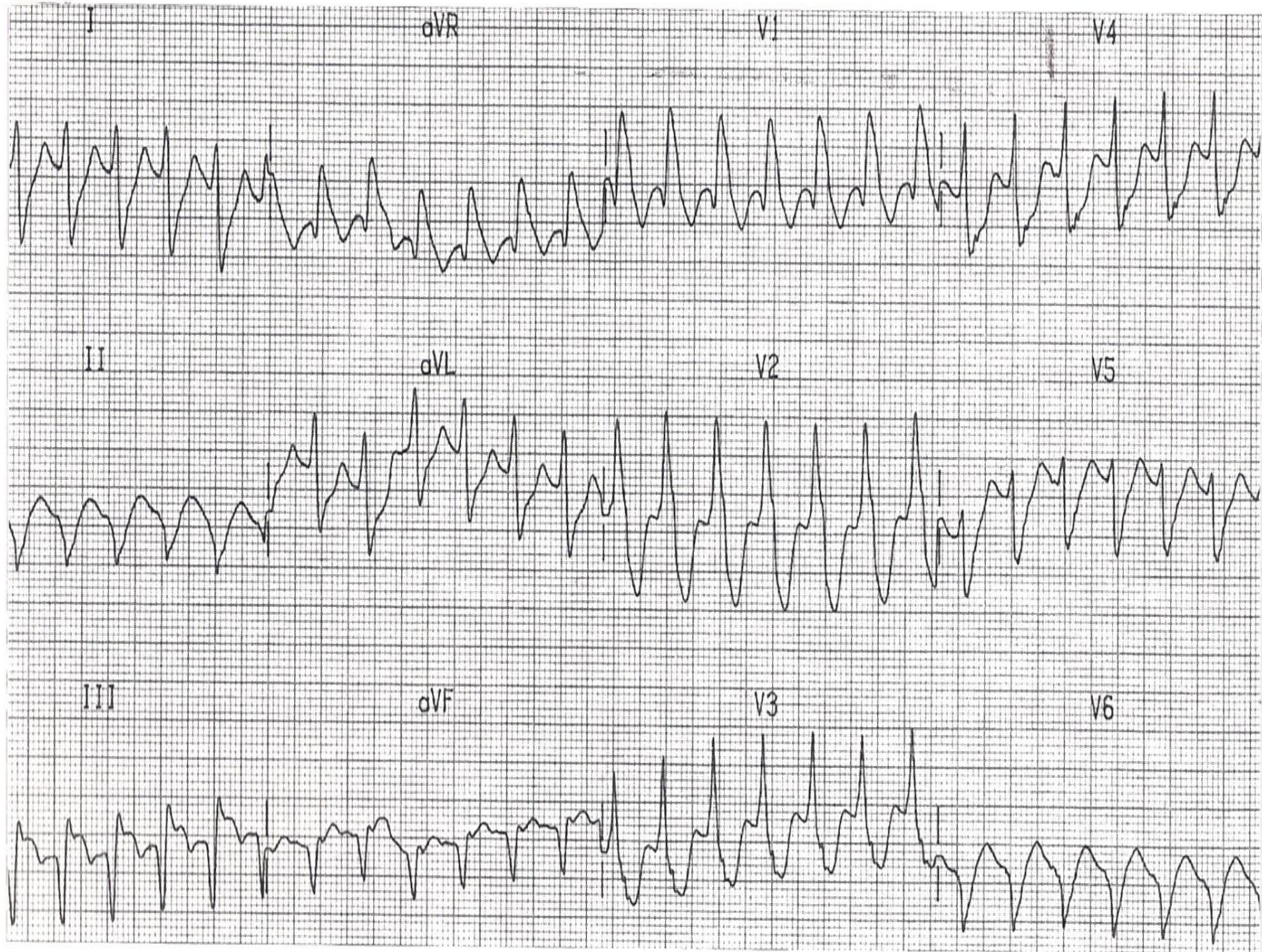
5.78

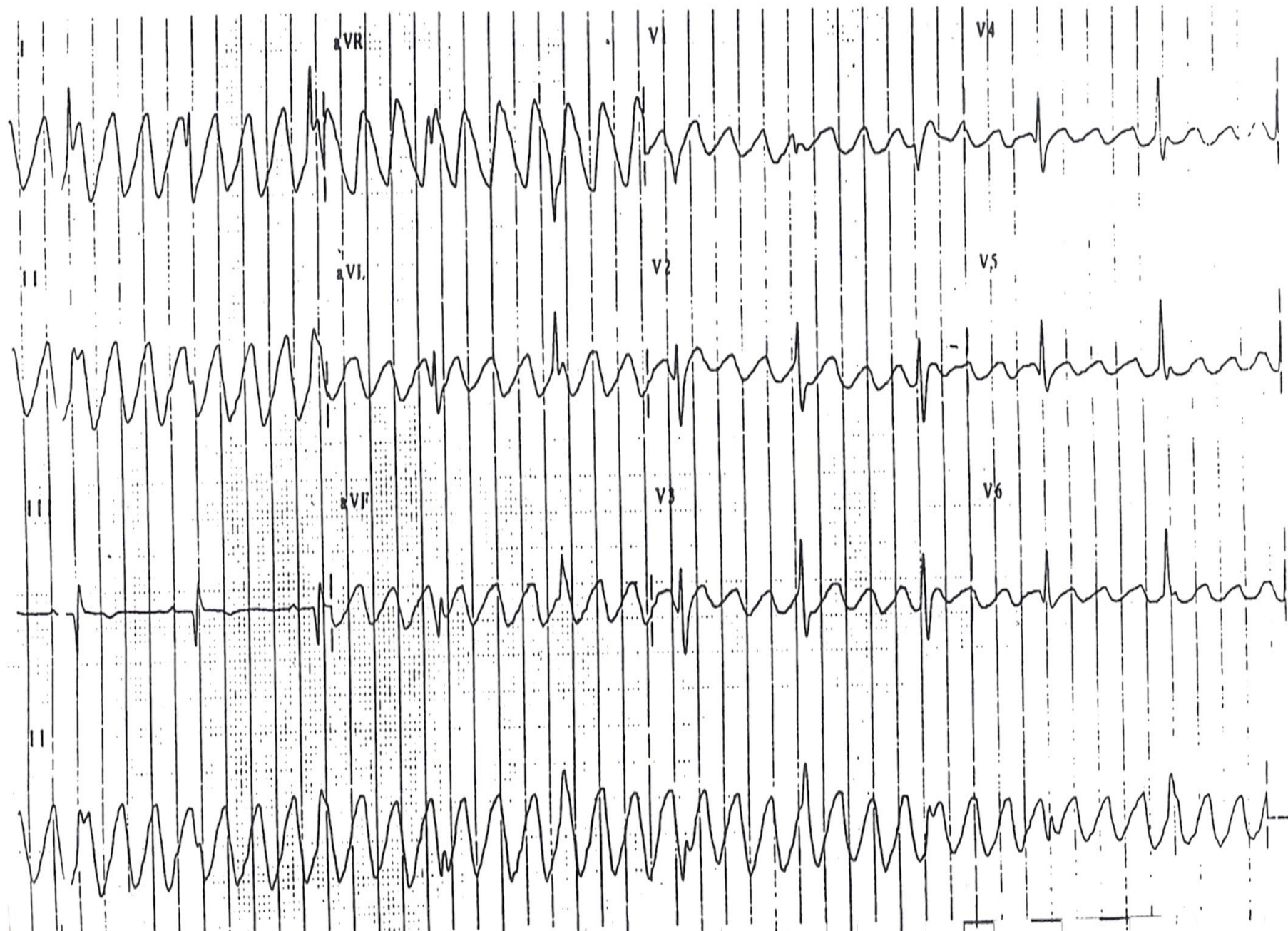
UNCONFIRMED REPORT

10 mm/mV

10 mm/mV







I

IaVR

IV1

IV4



II

IaVL

IV2

IV5



III

IaVF

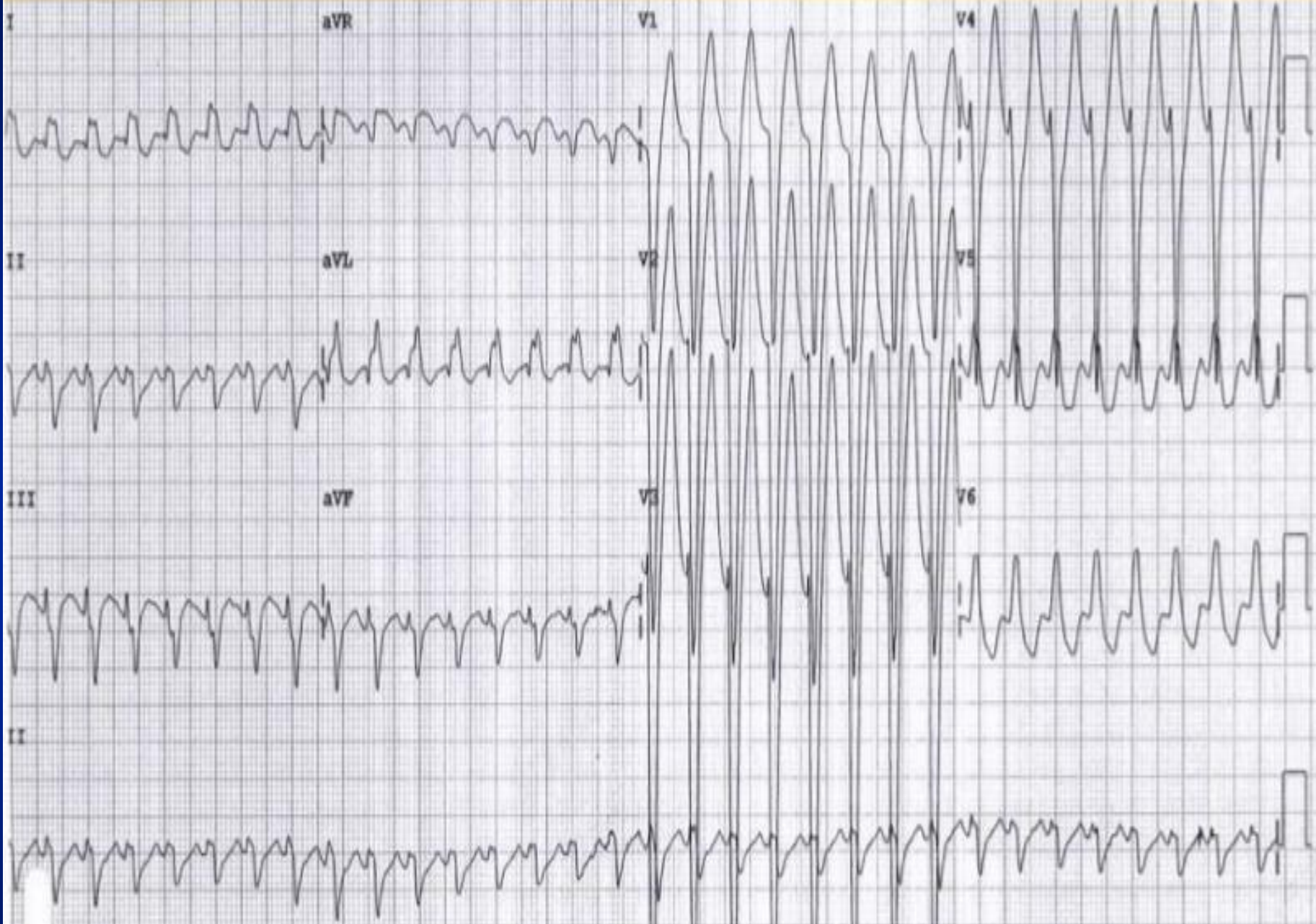
IV3

IV6



II





8/3/2011 12:32:35 AM

Rate 193 . AGE IS NOT ENTERED, ASSUMED TO BE 50 YEARS OLD FOR PURPOSE OF ECG INTERPRETATION
 . WIDE COMPLEX TACHYCARDIA.....V-rate> 99, QRsd>120
 PR 56 . SINUS PAUSE/ARREST W/ SUPRAVENTRICULAR.....long R-R interval, normal QRsd
 QRSD 136 ESCAPE
 QT 340 . NONSPECIFIC INTRAVENTRICULAR CONDUCTION.....QRsd >110ms, not LBBB/RBBB
 QTc 610 DELAY

--AXIS--
 P 0
 QRS 90
 T 267

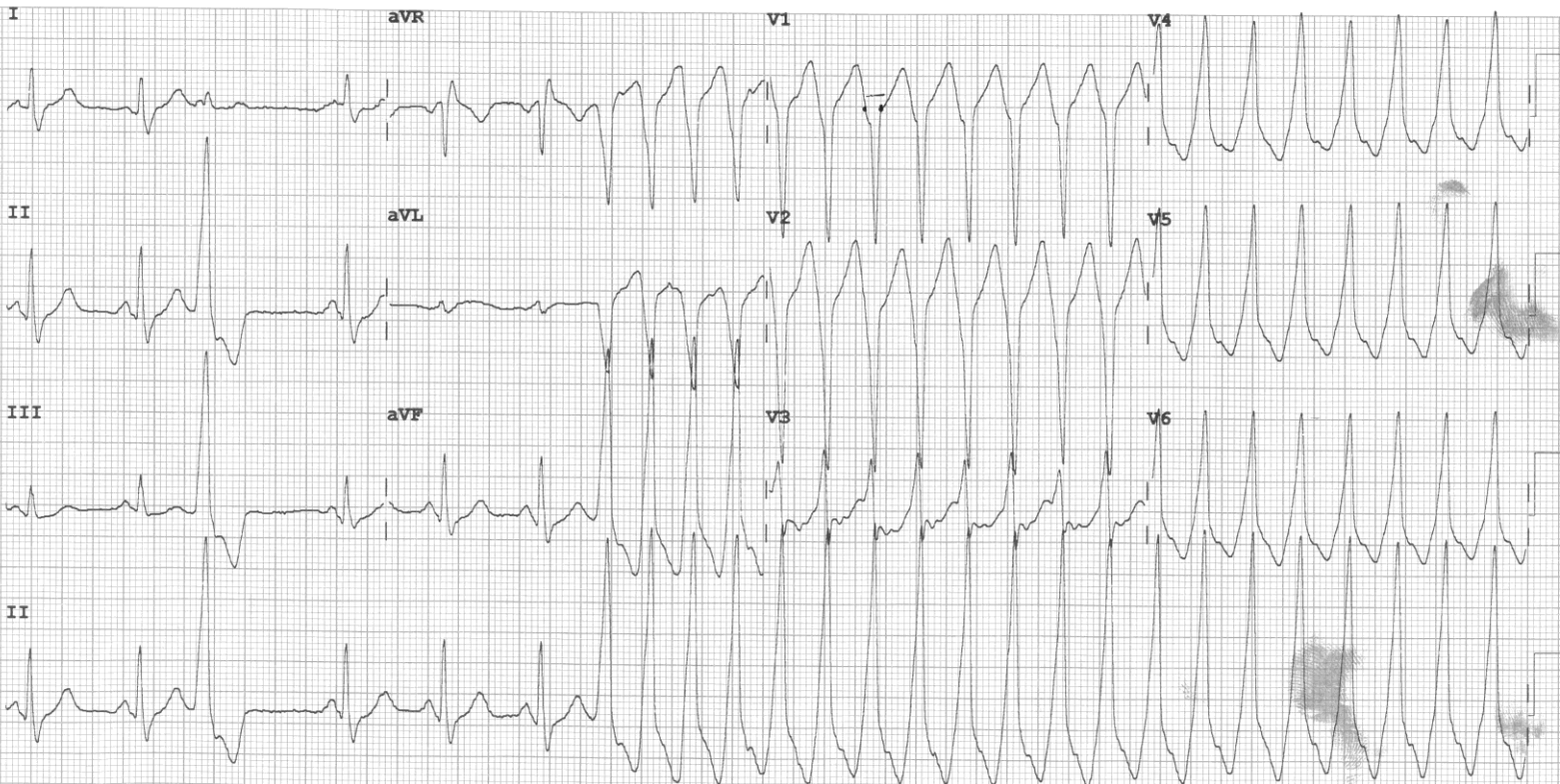
- ABNORMAL ECG -

S/B Du. Samee



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 SHERIN SALAH SALEEM
 DOB: 27/08/1979 Sex: F
 Nationality EGYPTIAN

Unconfirmed



Dev: Speed: 25 mm/sec Limb: 10 mm/mV Chest: 10.0 mm/mV

F 60~ 0.15-100 Hz

PH090A b L P?

Thank you