

ECG interpretation for final year OSCE

Dr. Iffatullah yousafzai

Reference From
Rapid interpretation of EKG
'Dale Dubin'



The 6 Questions

- Question #1: What is the rate?
- Question #2: What is the regularity?
- Question #3: Narrow or wide QRS complex?
- Question #4: What is the atrial activity?
- Question #5: What is the relationship of P to QRS?
- Question #6: Is the onset abrupt or gradual? Does the rate vary?

Activate Window
Go to Settings to activate

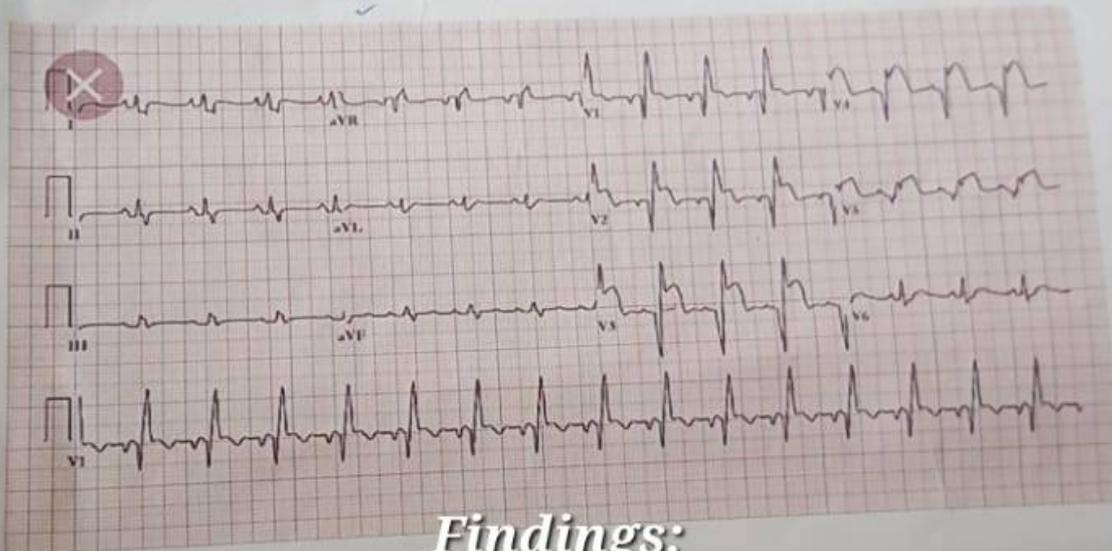
85%



Type here to search



Q wave show old infarction
ST Segment elevation show injury
is going on
inverted T waves mean mostly
ischaemia



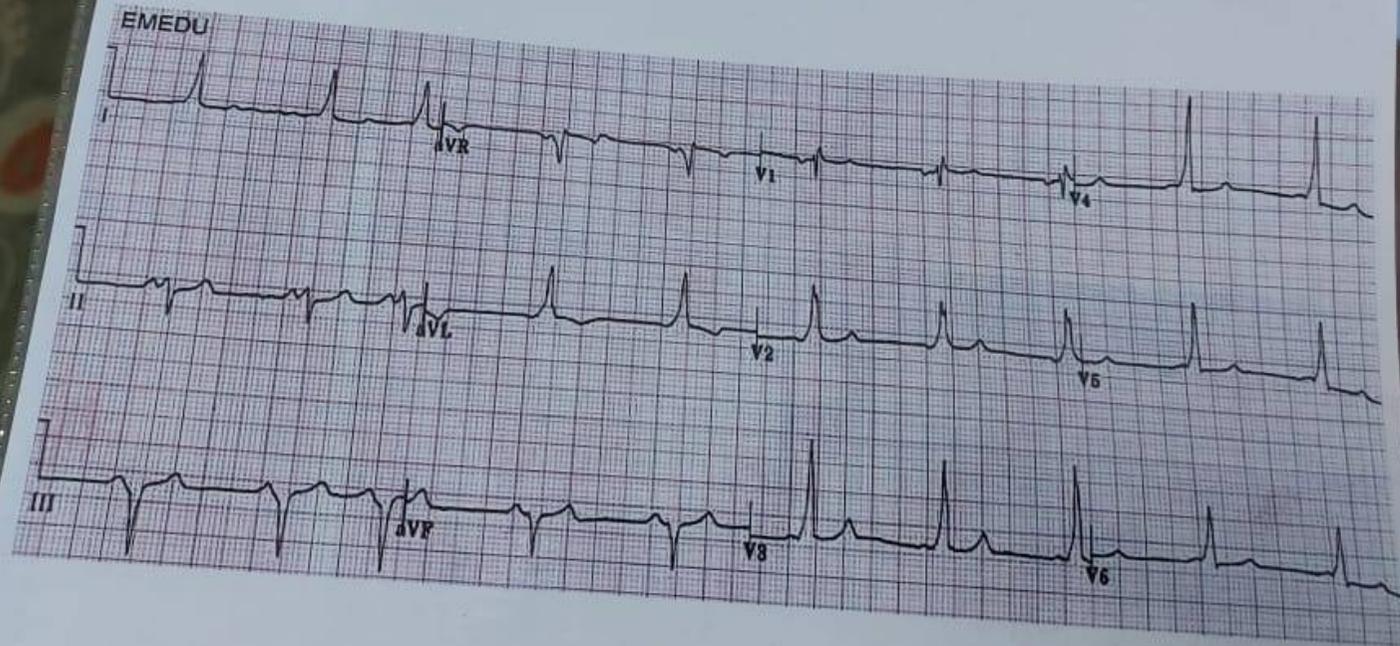
Findings:
pathological Q waves and ST
segments elevation in lead

V1, V2, V3, V4

Diagnoses:

Reanterior wall MI

WOLF PARKINSON WHITE SYNDROM



Findings:

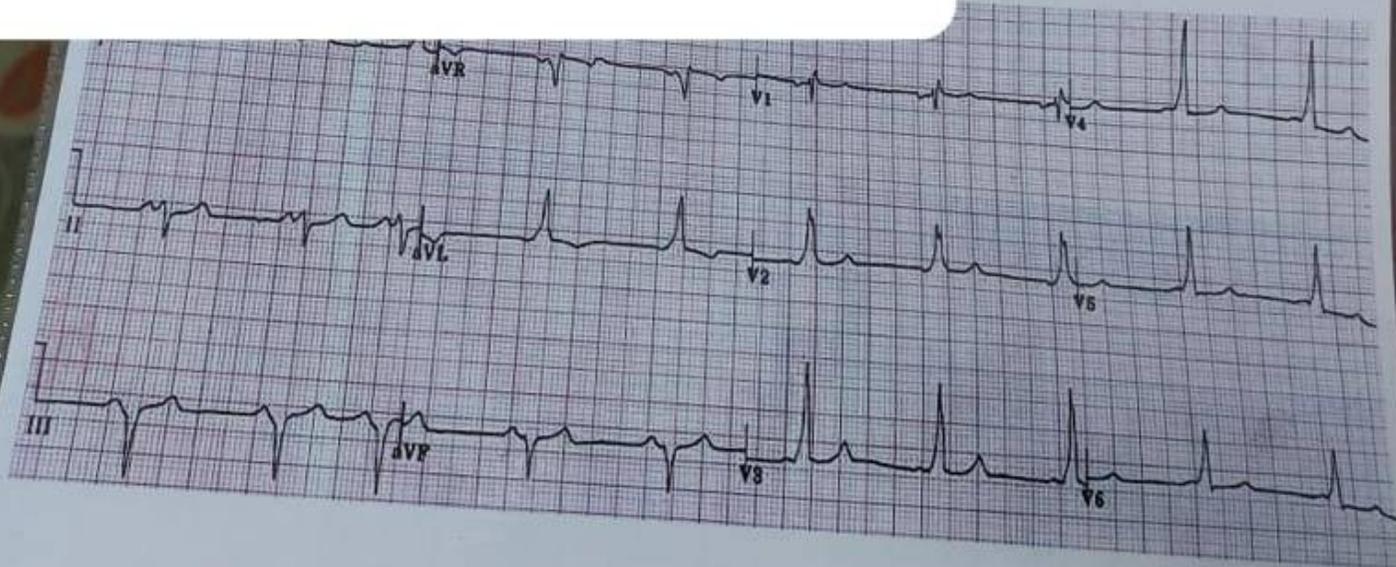
I +ive and avF -ive

Delta waves are present

M sign in lead II but QRS complex wide less than 3 small box.

Diagnosis:

LEFT AXIS DEVIATION and WOLF PARKINSON WHITE SYNDROME + partial RBBB.

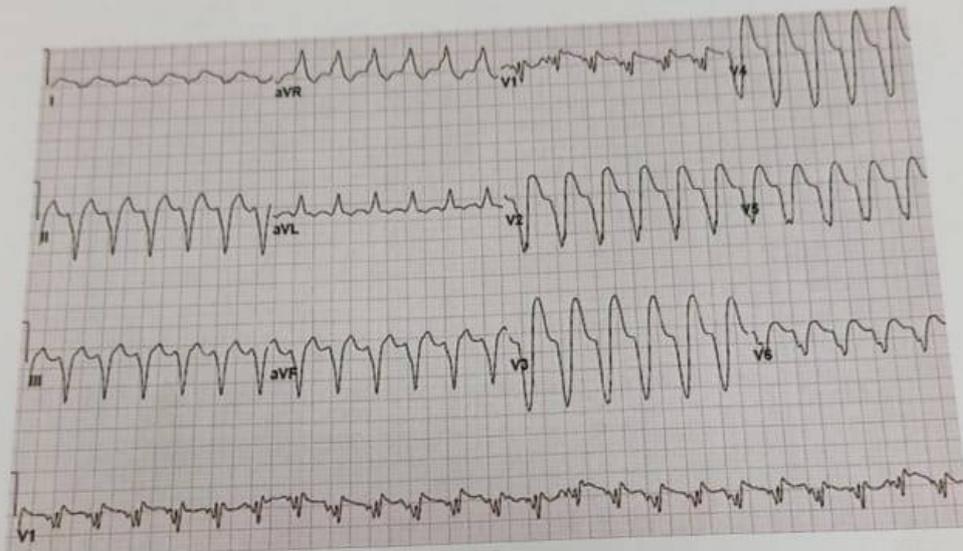


ventricular Tachycardia



Station (3)

STATION: ()



1. What is your diagnosis?(3)
2. How will you treat such condition when the pt is haemodynamically unstable? (2)
3. What are the pharmacological drugs used in this condition? (5)

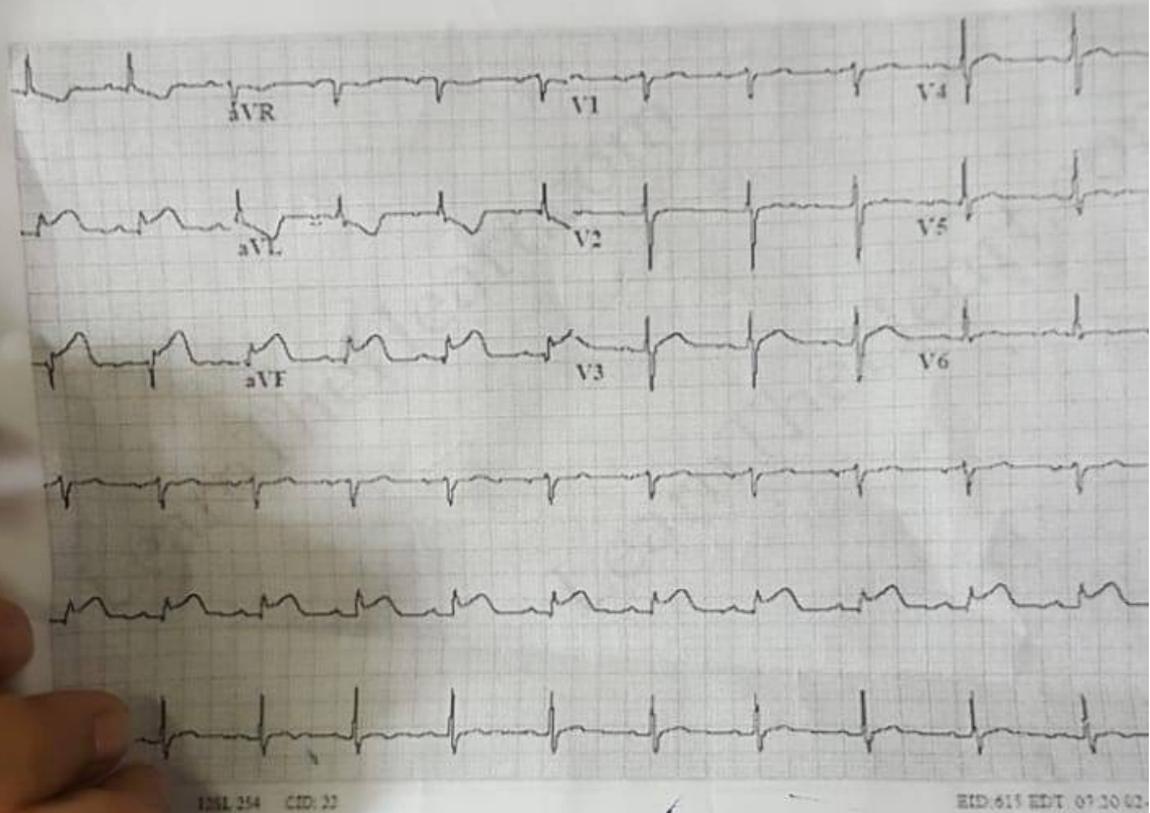
- 1) ventricular tachycardia**
- 2) synchronized DC Cardioversion**
- 3) Amiodarone, Beta Blockers**

Findings:

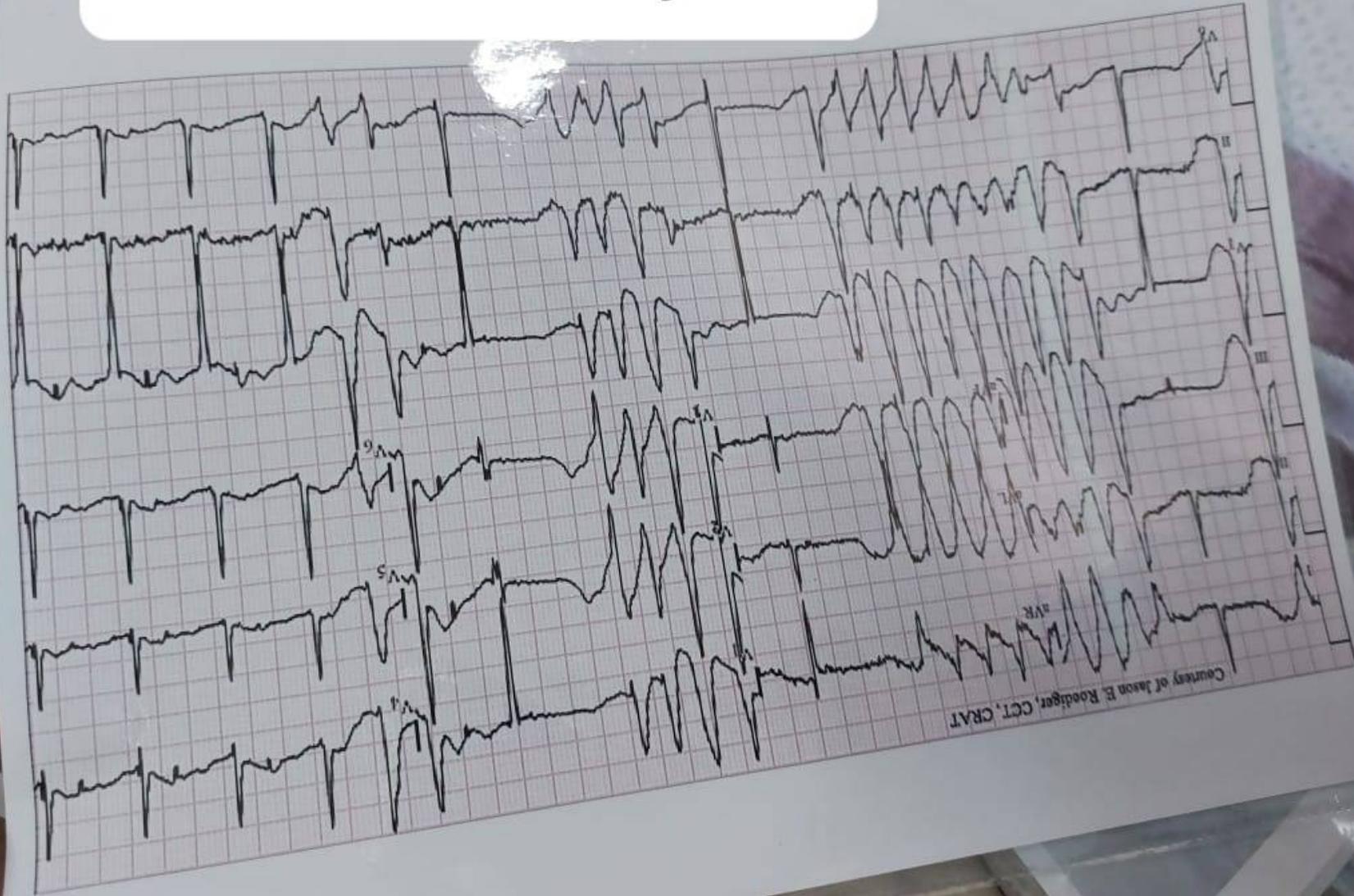
ST Segment elevation in II, III and avF with reciprocal Depression in I, avL.

Diagnosis :

inferior wall MI



Non sustain ventricular Tachycardia



Courtesy of Jason E. Roodiger, CCT, CRAF

Findings:

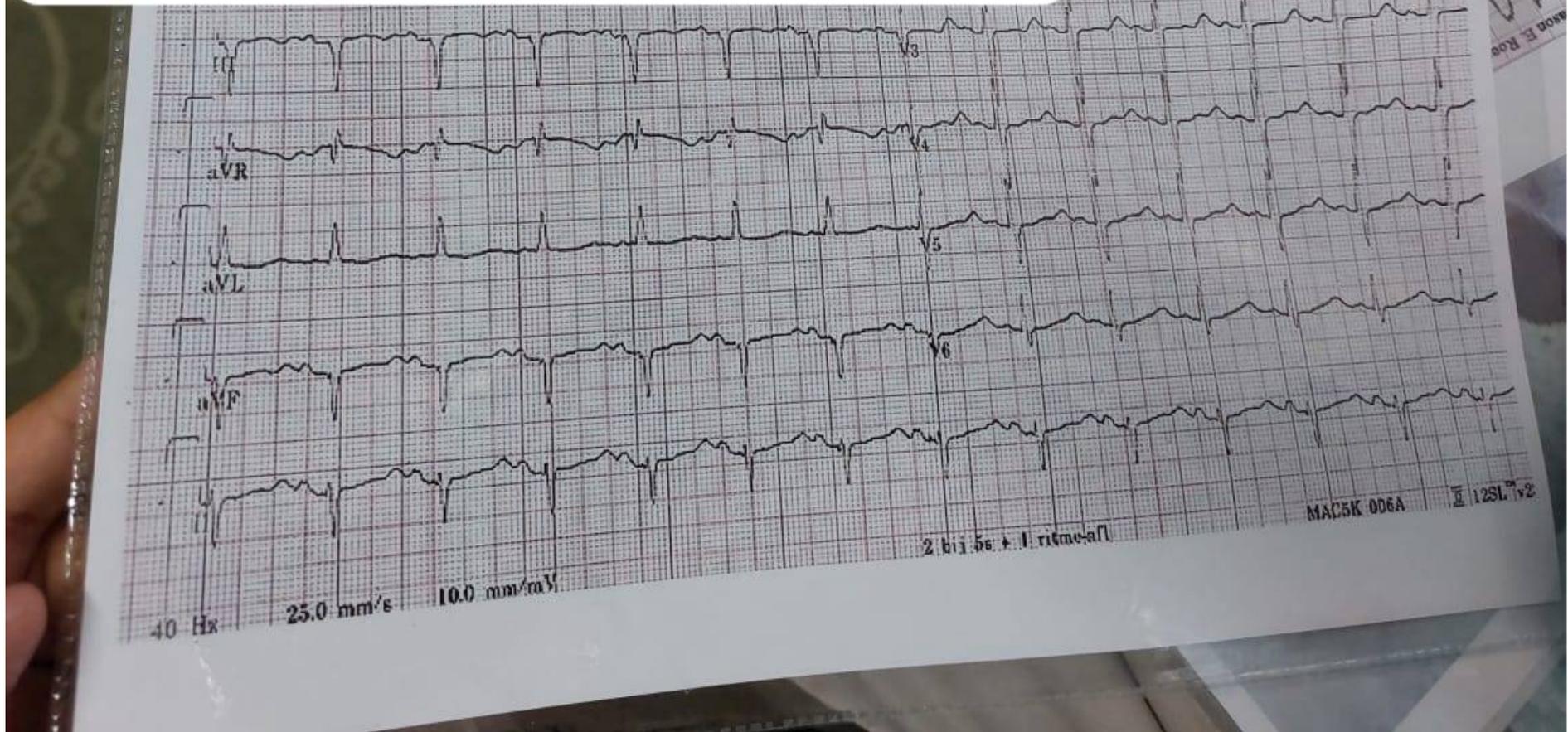
prolonged QT interval

Diagnosis:

prolong QT syndrome &

left Axis Deviation b/c lead 1+ & avF-

D/Ds: Intrinsic Cardiac causes, Electrolytes abnormality, Medications, Idiopathic, medical conditions (hypothyroidism, Anorexia nervosa)

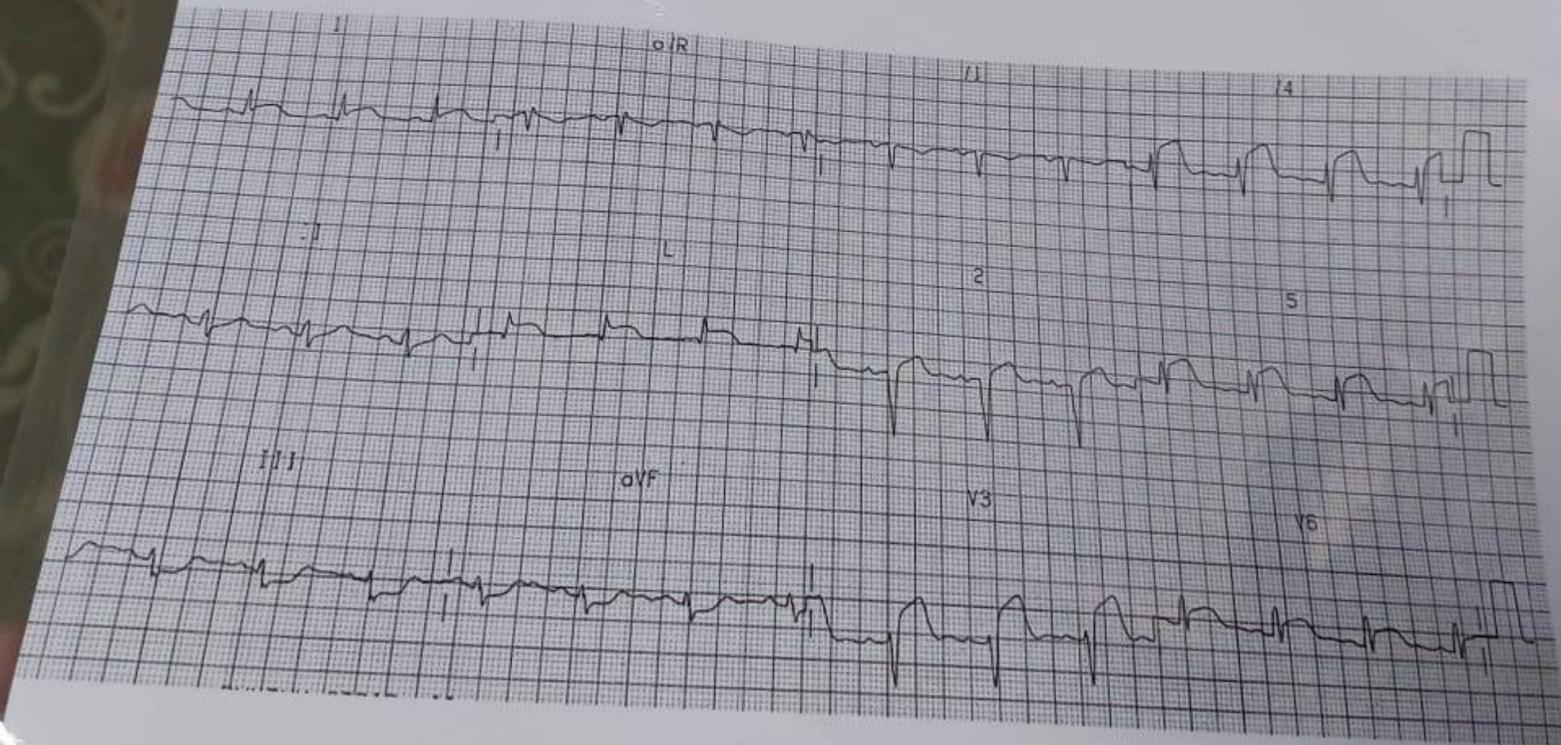


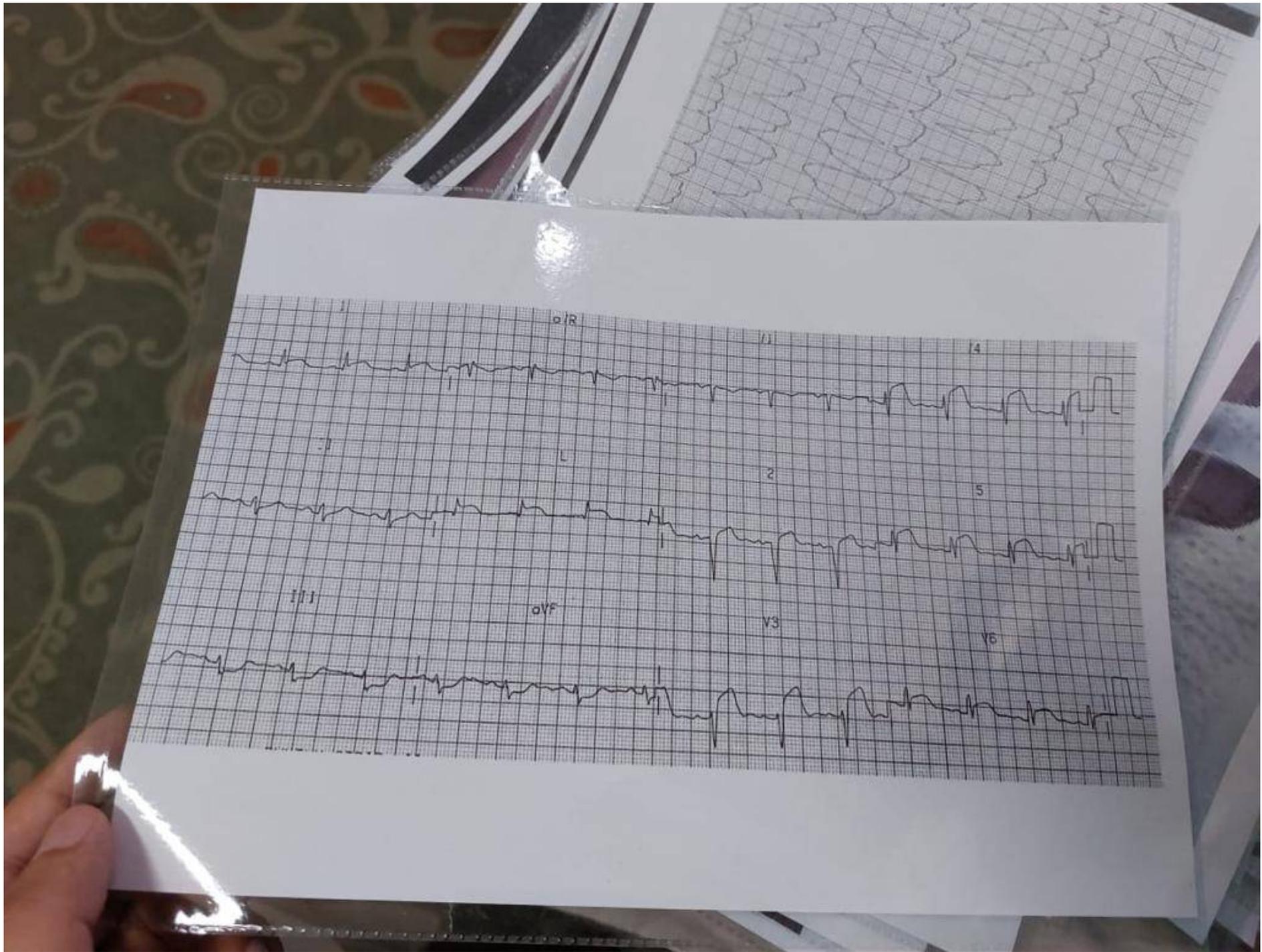
Findings:

ST Segments Elevation in 1,avL& V1 upto V6 with reciprocal Depression in 2,3.

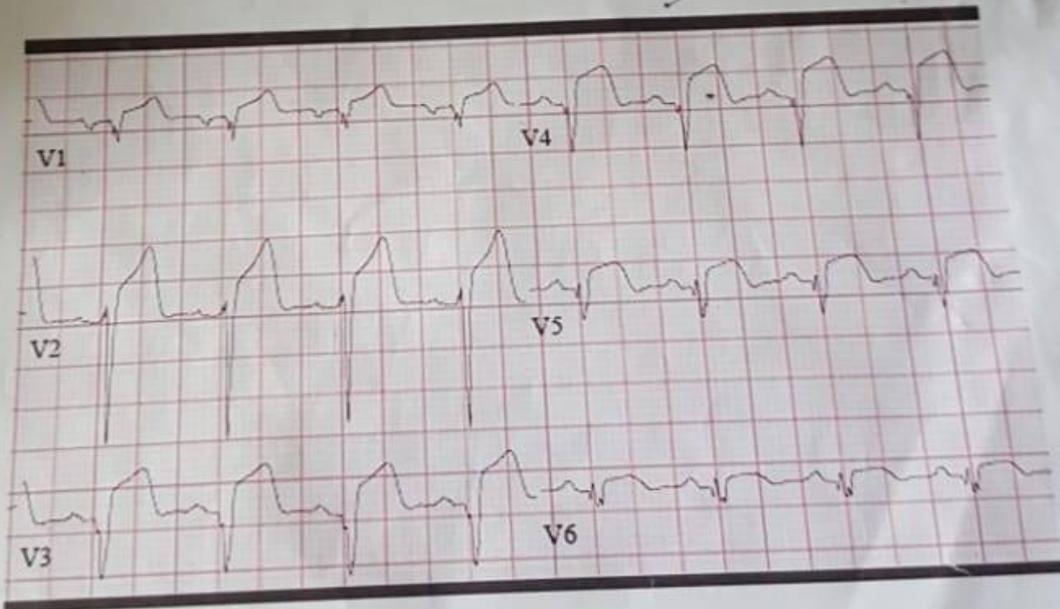
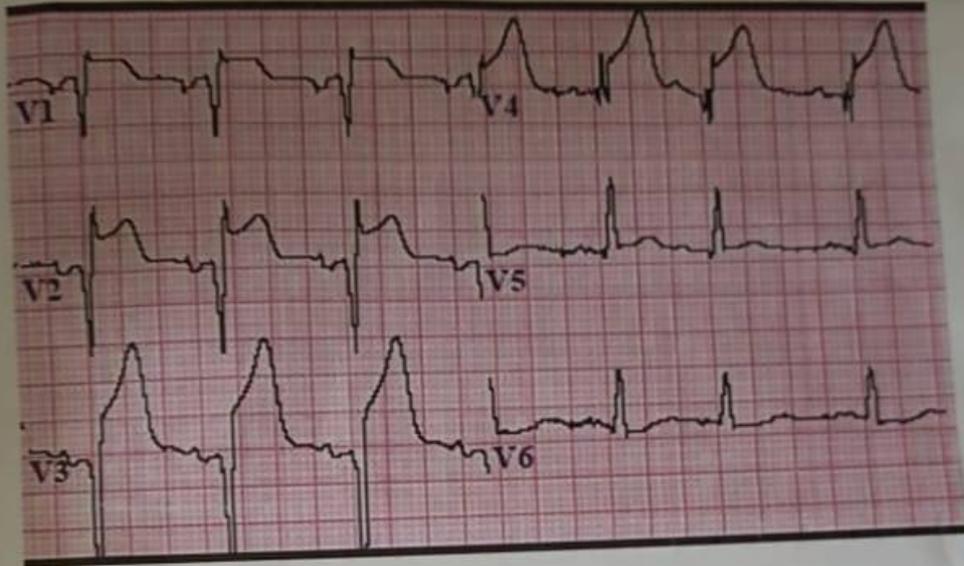
Diagnosis:

Extensive anteriolateral Wall MI





ST segment
elevation



Findings:

**ST Segment elevation in V1--V4
and**

2nd ECG ST elevation in V1 --V6

Diagnosis :

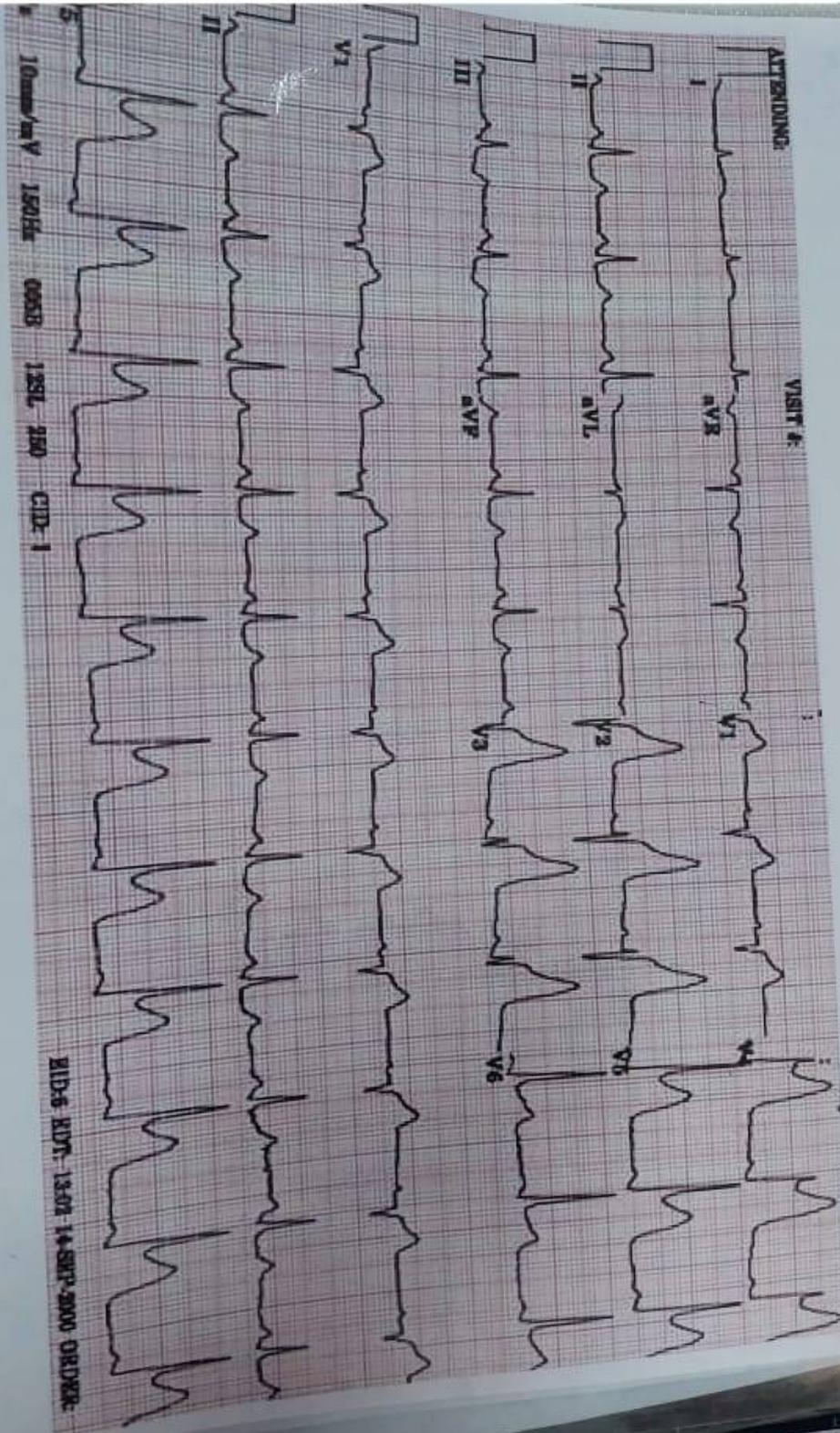
Extensive anterior wall MI

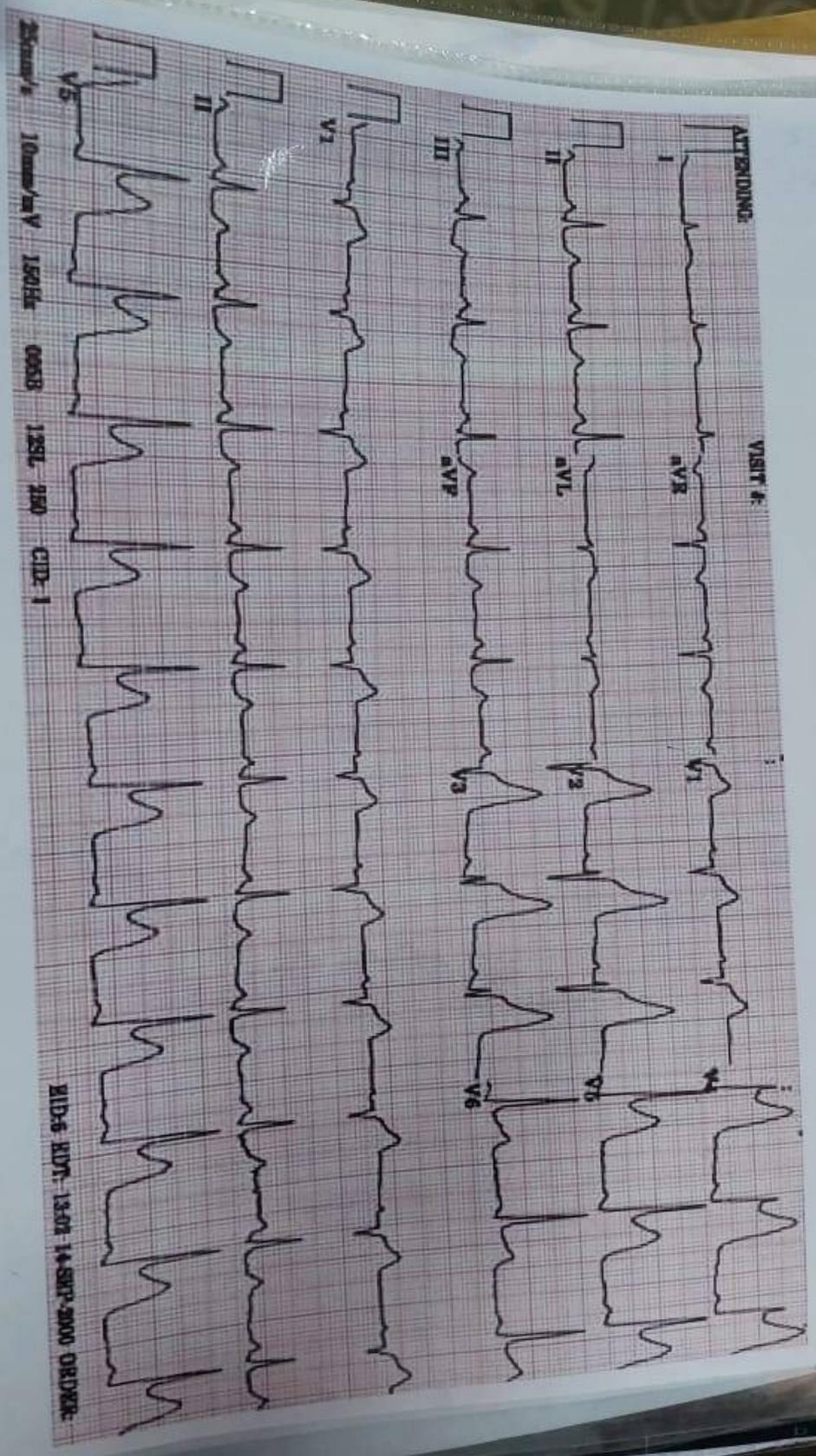
Findings:

ST elevation in V1--V6 with reciprocal Depression in inferior leads (2,3,avF)

Diagnosis :

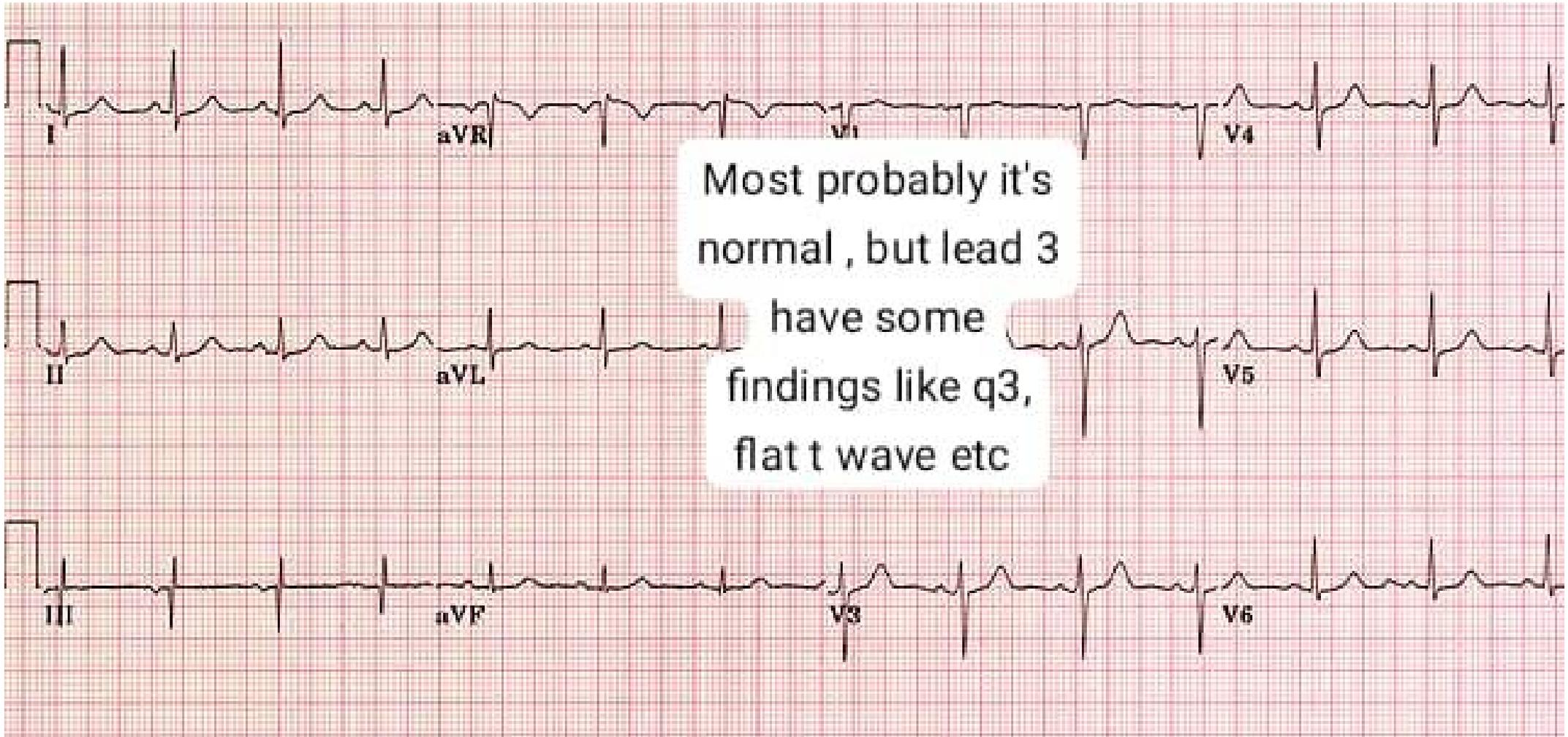
extensive anterior wall MI.

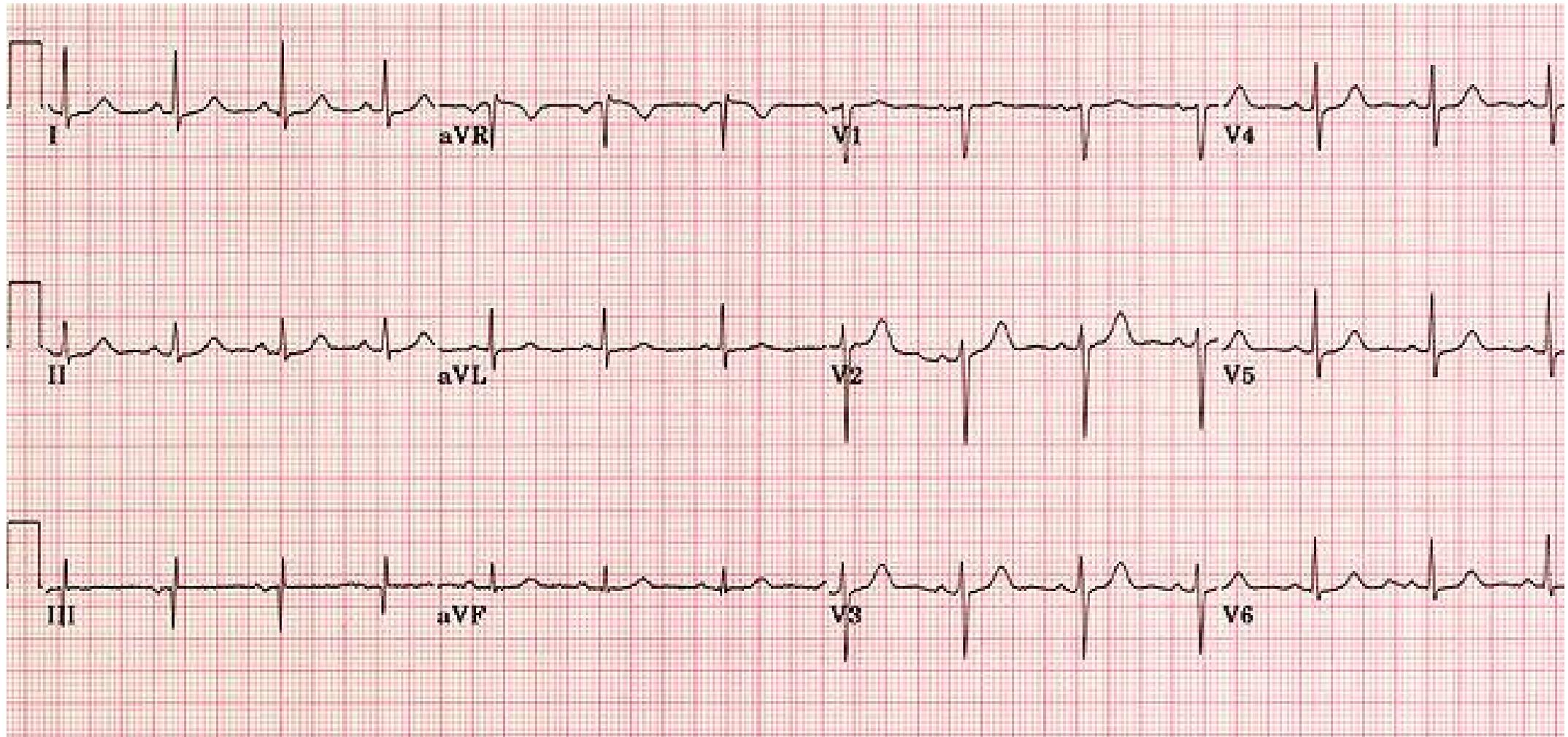




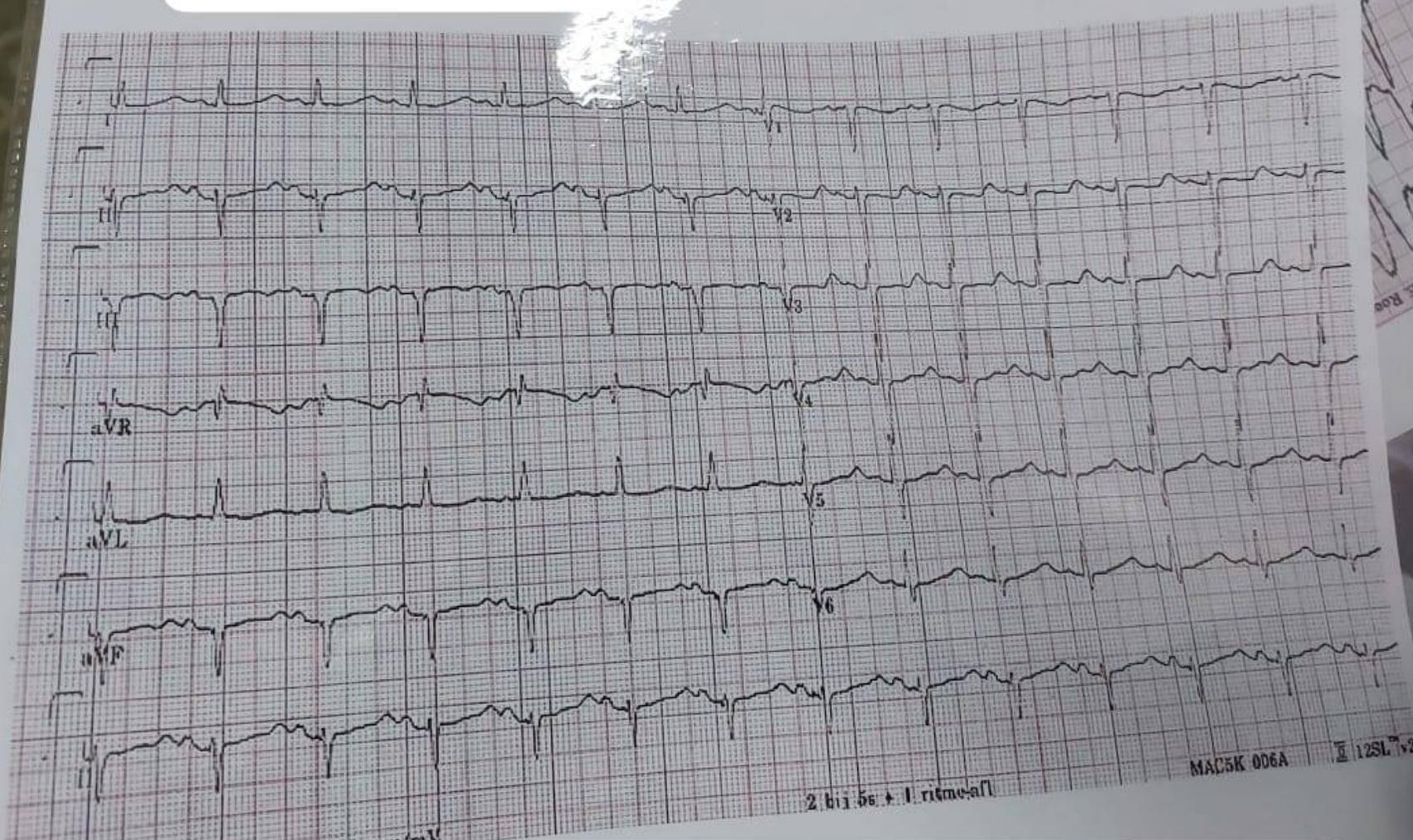
25mm/s 10mm/mV 150Hz 0058 129L 210 CID: 1

MLD-6 HDT-1307 14-SEP-2000 OED/ER



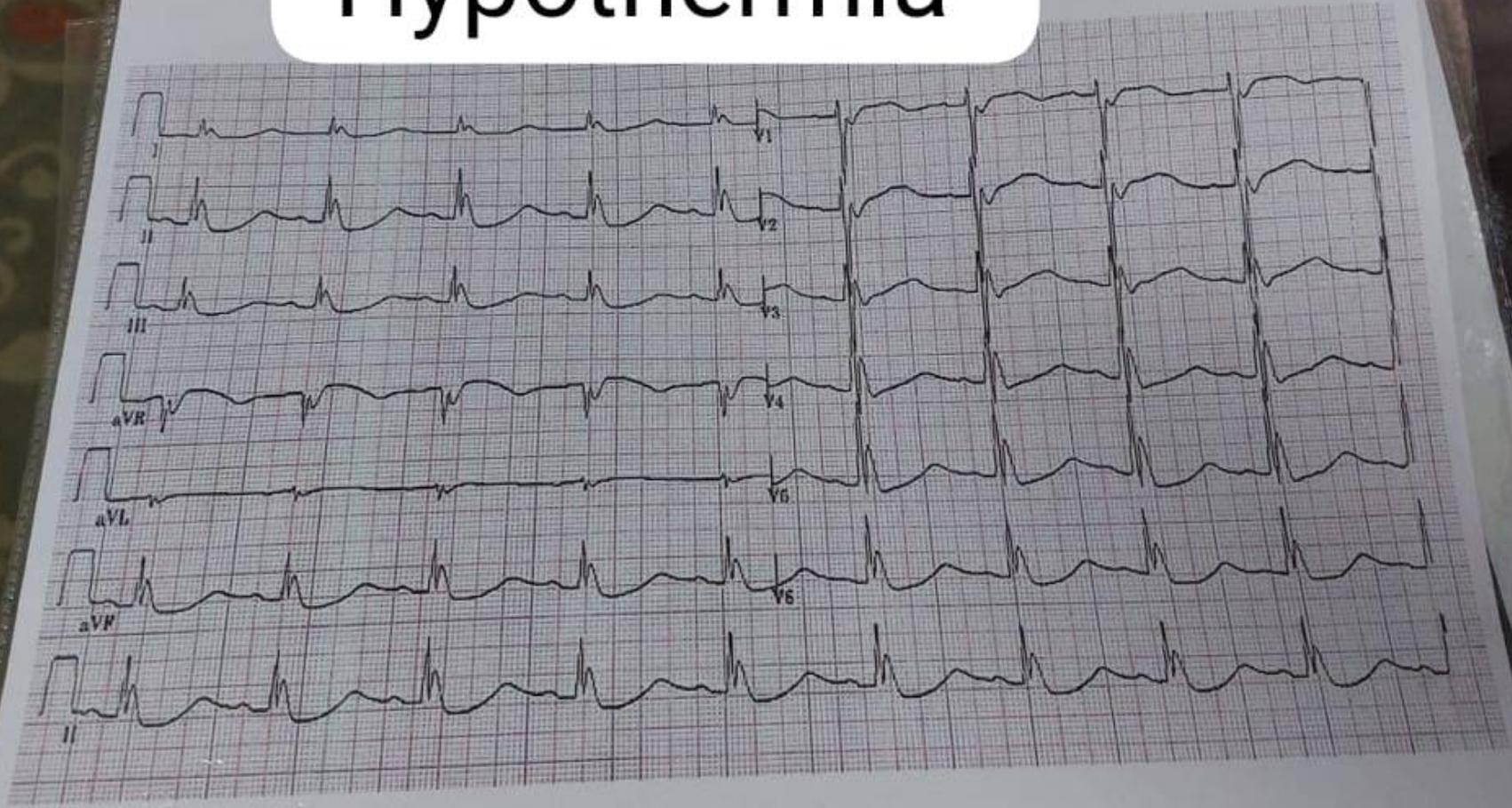


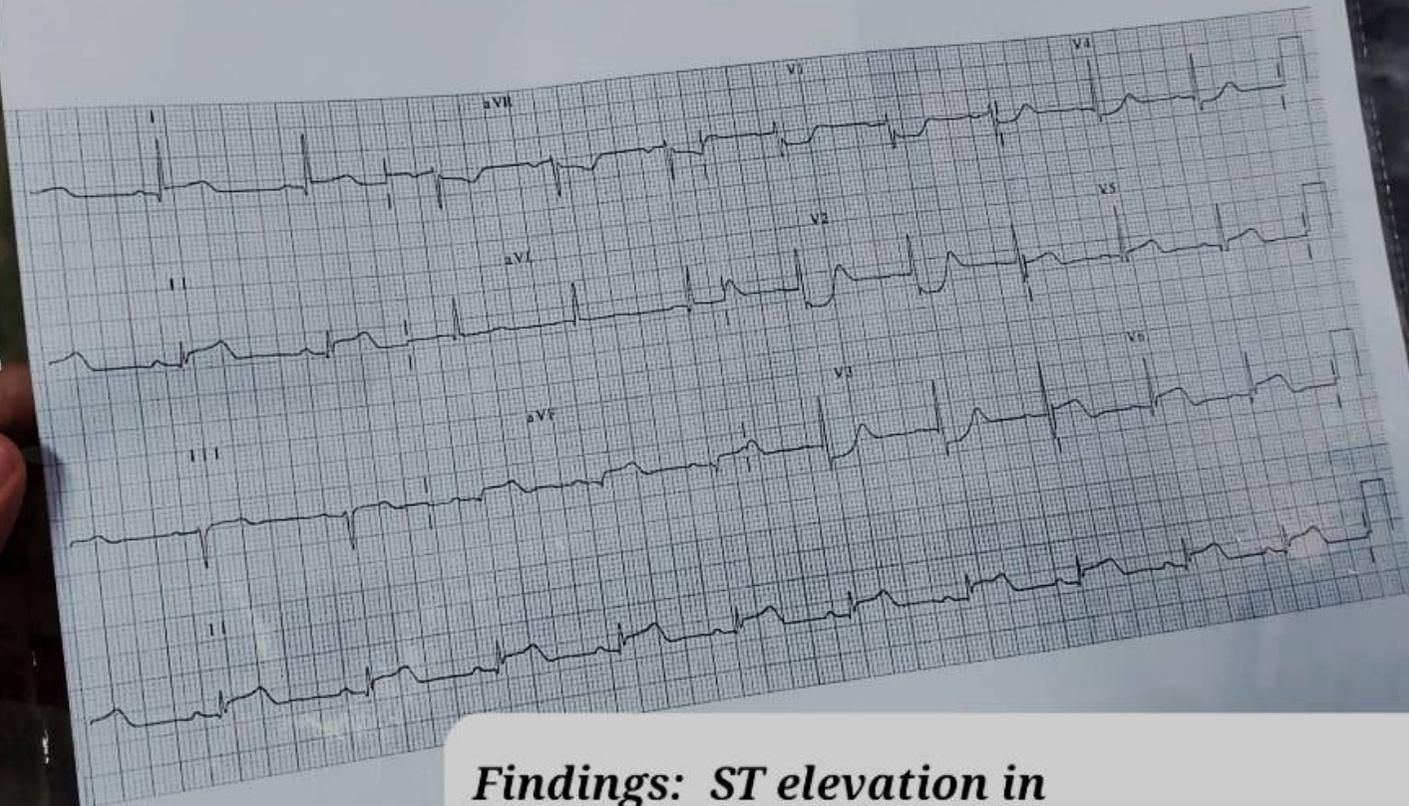
Left axis deviation



QT interval seems a bit prolonged

Osborn waves Hypothermia



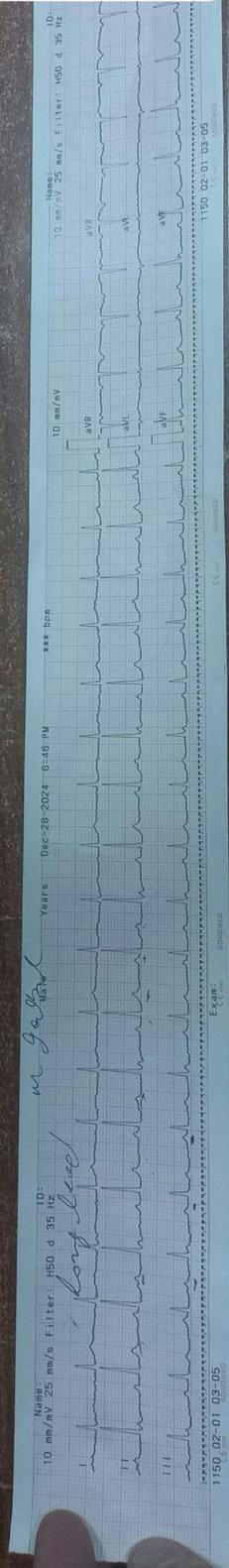


Findings: ST elevation in lead I, aVL, V5, V6 --lateral MI & Lead II, III & aVF --- inferior MI & lead V2, V3 ST Depression & R>S-- Posterior MI
DIAGNOSIS:
Infero-posteriolateral wall MI

Findings: In lead II the P wave is not correlate with QRS complex the P wave is not follow QRS complex it show AV Dissociation. the interval b/w two P wave and QRS complex is constant.

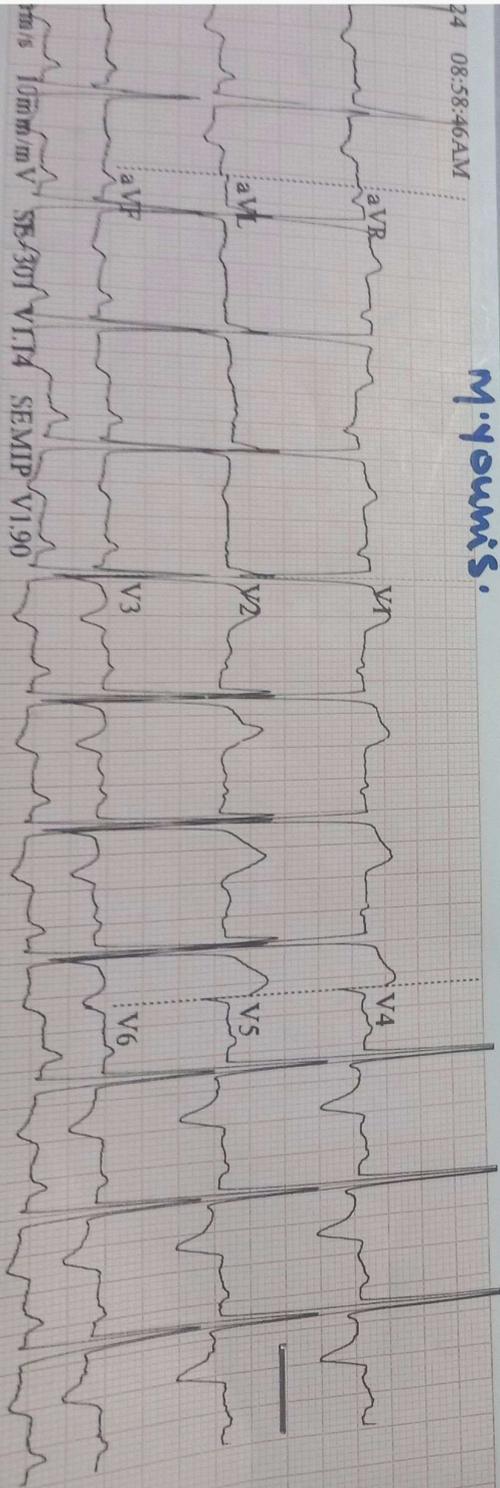
Diagnosis: complete heart block.

with control heart rate

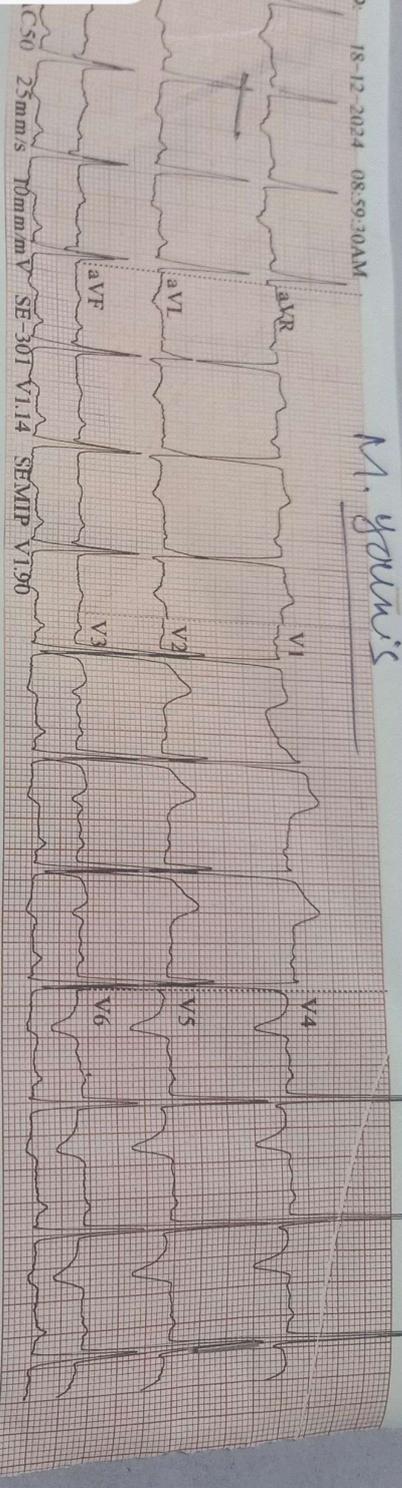


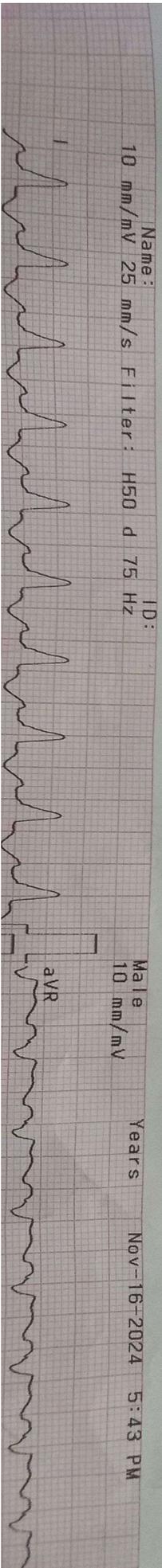
Findings; deep S wave in V1+R wave in V5 greater than 7 large boxes and lead I, avl, V3, V4, V5, V6 inverted T waves and lead V4, V5, V6 ST Segment depression.

Diagnosis: Left ventricular Hypertrophy with strain pattern

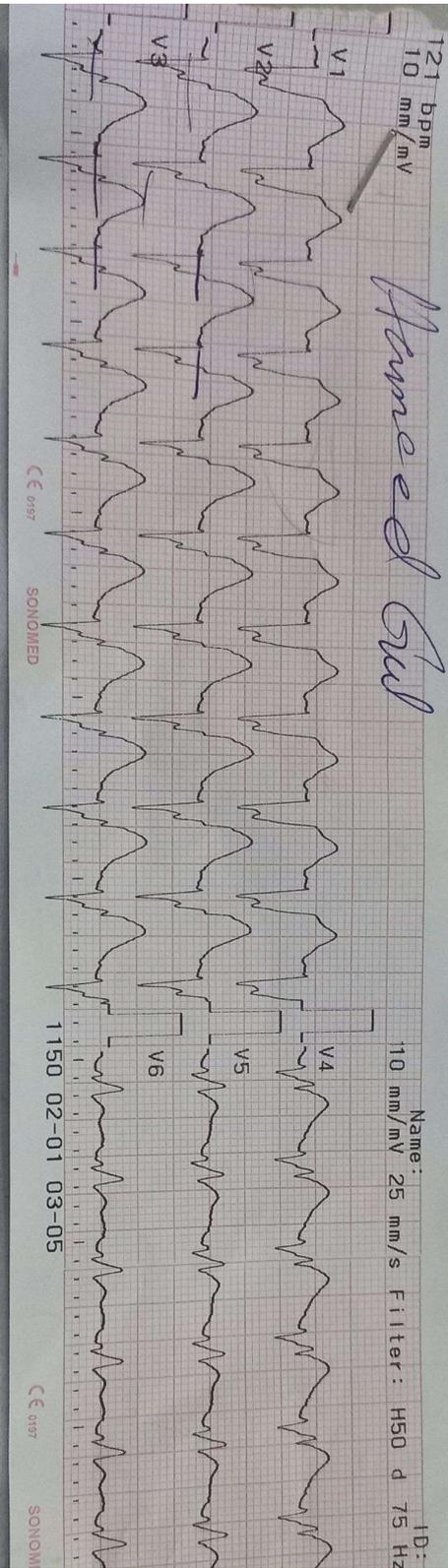


HSTN - strain pattern
asym. T wave inversions





LBBB



1 of 1

158

MEDICAL TEACHING INSTITUTION
 Avub Teaching Hospital, Phone: 09997...
 Email: info@ath.gov.pk

atheter. LAD wired with
 ENCE XPEDITION DES
 artery remained subtotally

Dr. MIRAN KHAN
 A.P. Cardiology Department

3.0 mm x 33 mm
 XIENCE Xpedition™
 UDI: (01)08717648157829
 UDI: 4659341

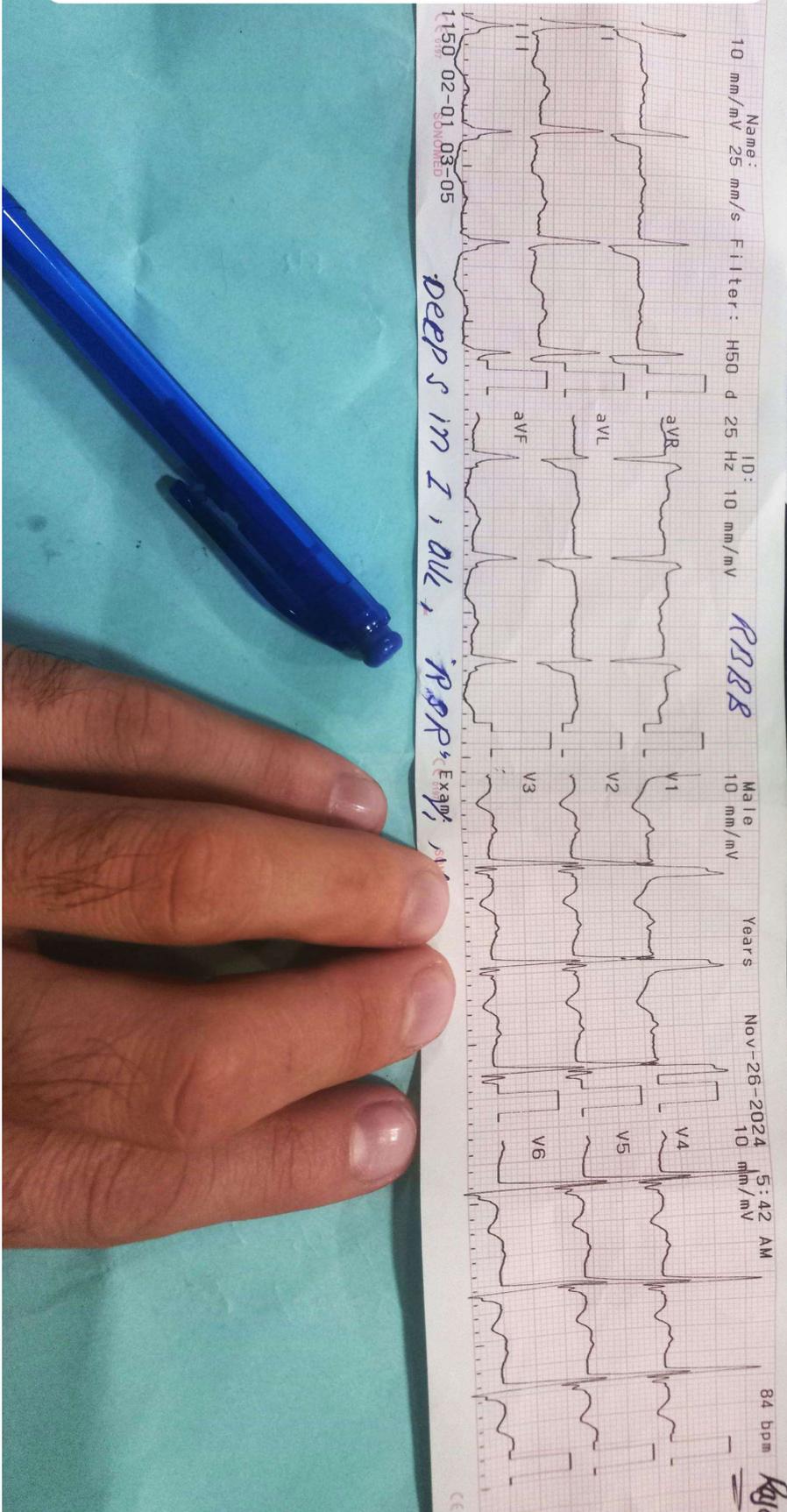
Findings:
Broad QRS complex more than 3 small boxes (>0.12sec) and W pattern in lead V1 and M pattern in lead V5.
Diagnosis: complete Left Bundle Branch Block

Findings:

Deep S wave in lead I & avl

Rsr(M) pattern in V1 and W pattern in lead V5

Diagnosis: Right bundle branch block



Deep S in I, aVL, V1, V2, V3, V4, V5, V6

RBBB

Page 1 of 1

Abbotabad

Page 1 of 1

Requested Report Received : 26-NOV-2024 06:43:26

Report Destination : 26-NOV-2024 06:13:5

In-house Consultant : Muhammad Rizwan

Ordered By

Haematology Report

INSTITUTION ABBOTTABAD

Website: www.abt.gov.pk

0992-380328

0992-920174

06:31:26

26-NOV-2024

26-NOV-2024 05:55

26-NOV-2024 06:43:26

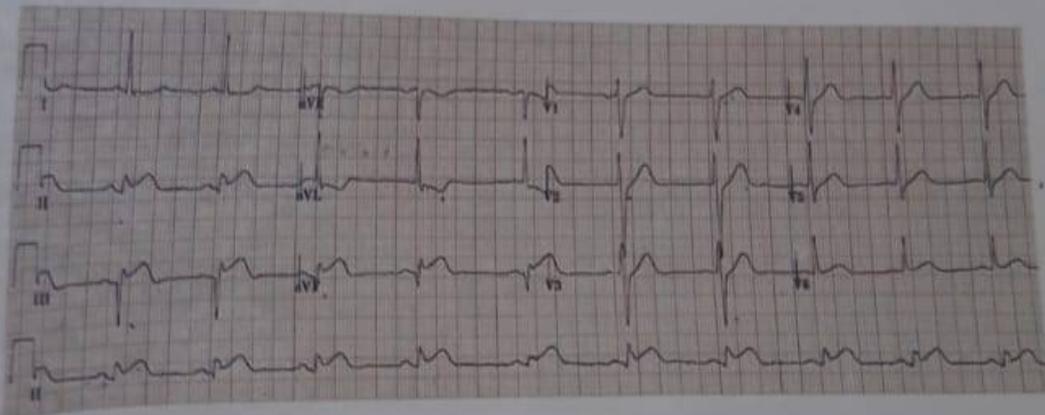
13.5

4.34

UNIT(S)

K04HEW24251940

Station #01

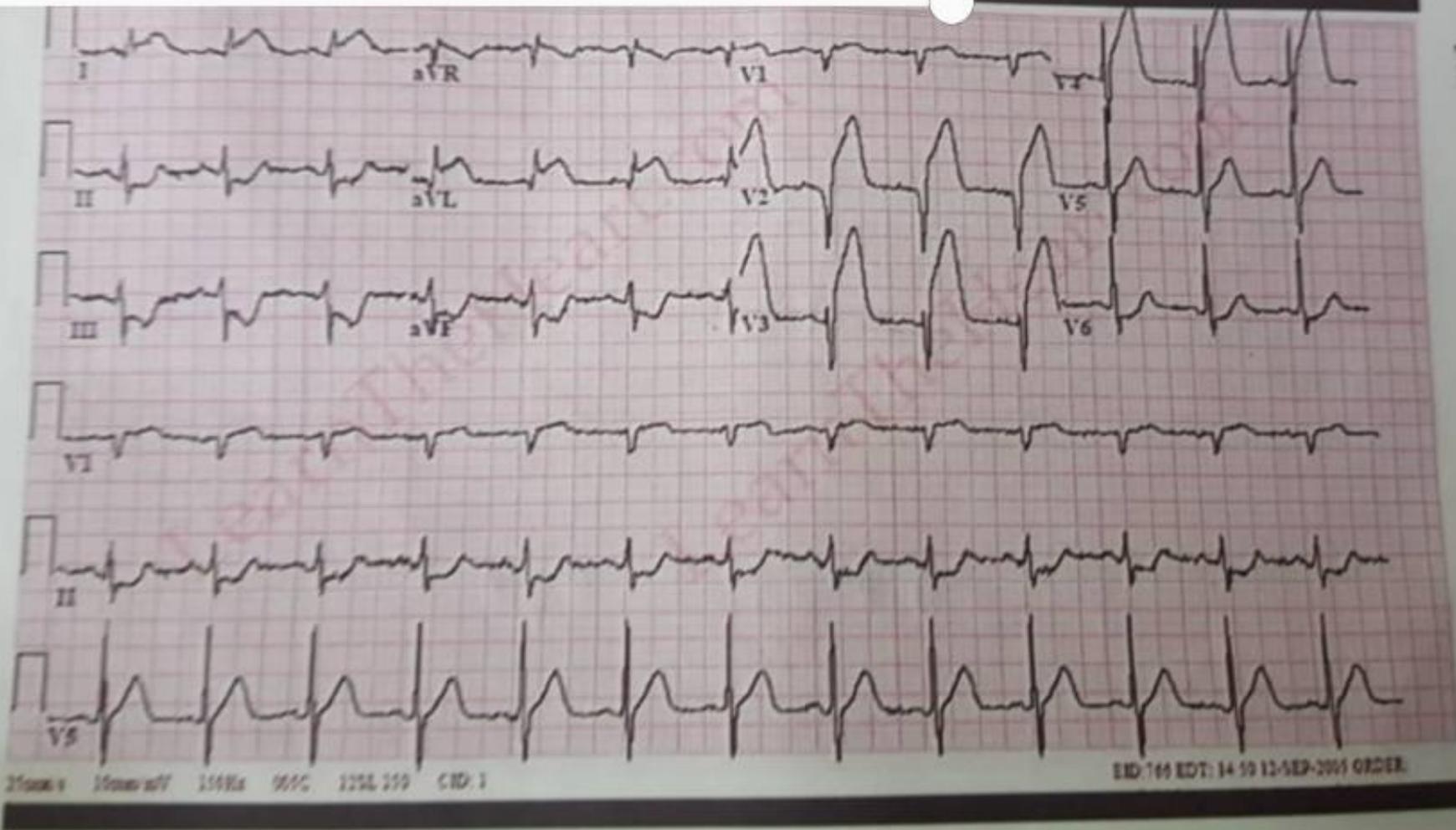


Findings:
**ST elevation in lead II,III and avf with reciprocal
Depression in avl**
Diagnosis: inferior wall MI

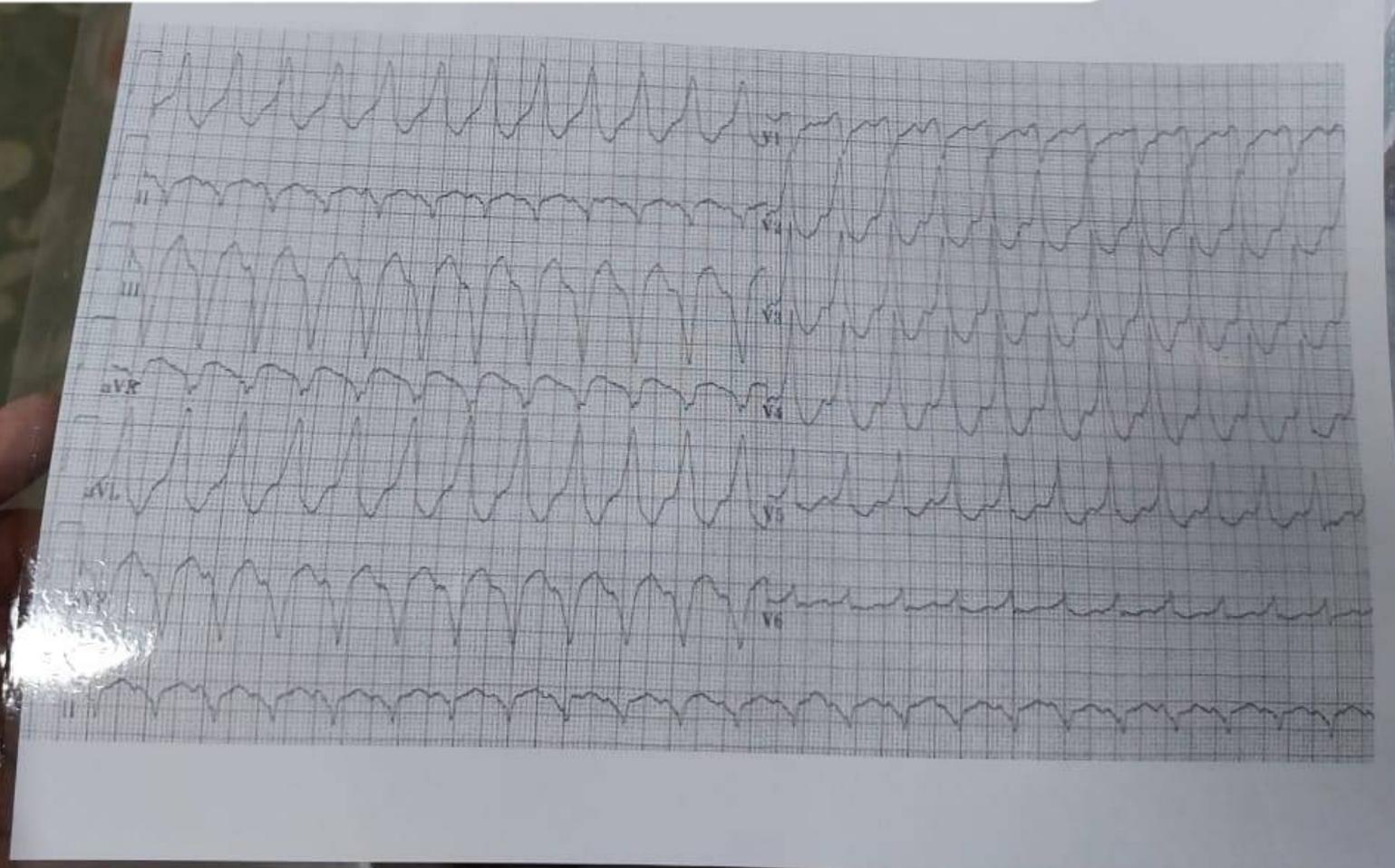
FINDING

ST elevation in V2, V3, V4, V5 and I, aVL with reciprocal ST Depression in inferior leads (II, III, aVF)

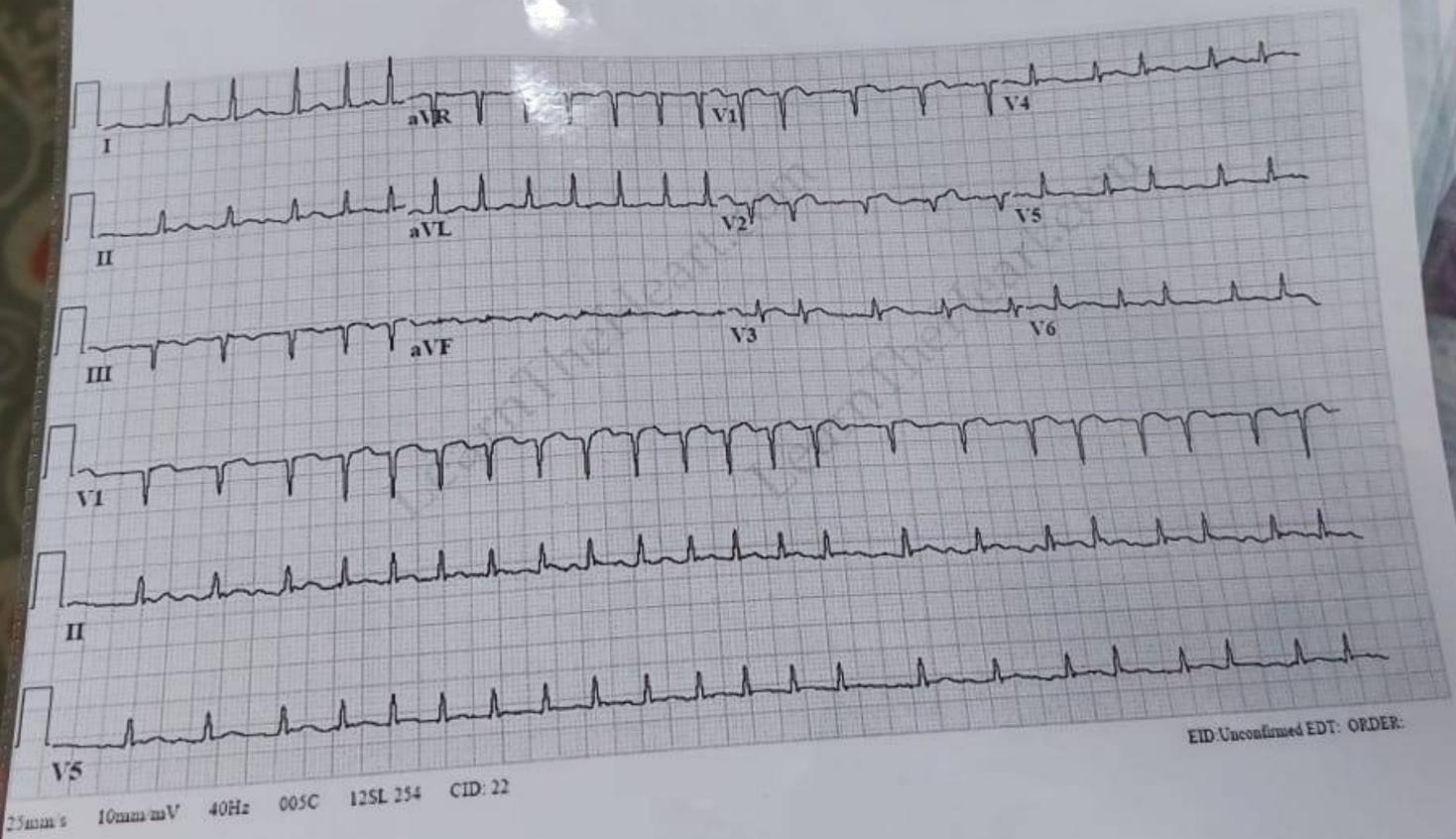
**Diagnosis
(Anteriolateral wall MI)**



Findings: wide QRS Complex and absent of P waves
Diagnosis: ventricular Tachycardia



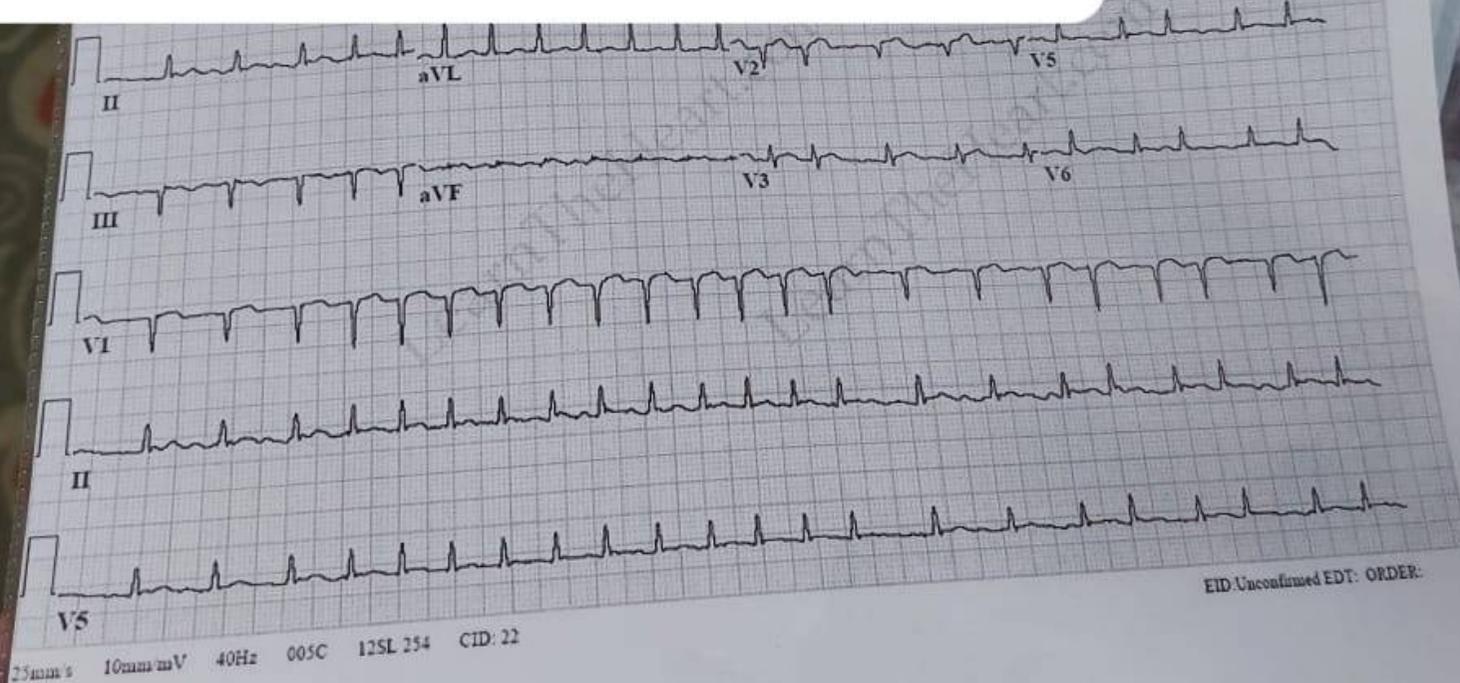
Af



Findings:

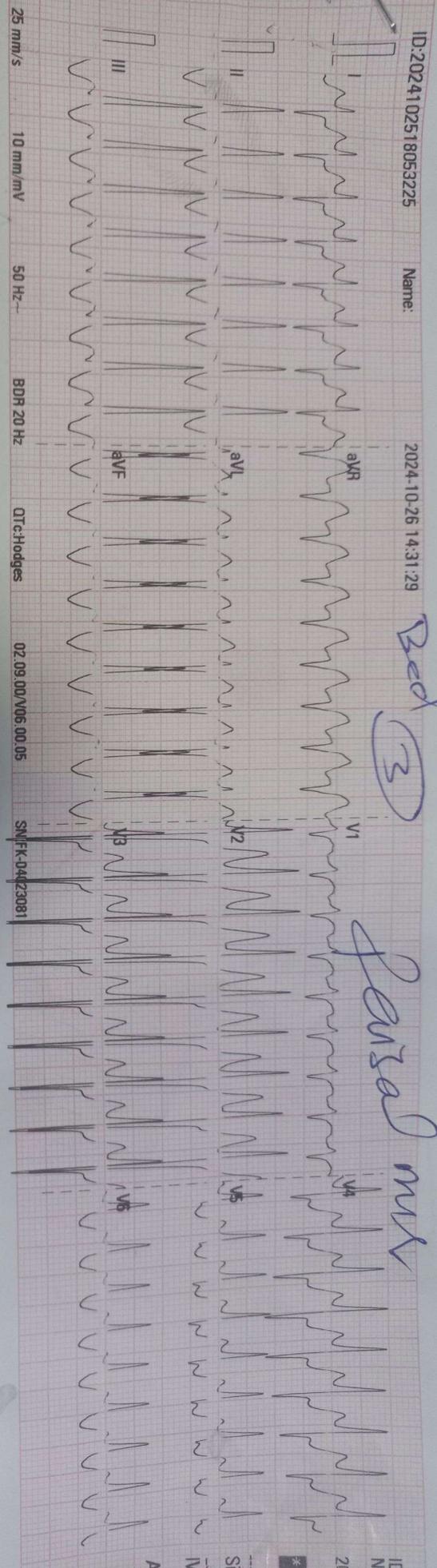
in these type of ECG directly read lead II which is Rhythm irrregular and absent of P waves & also calculate the rate (Count number of QRS complex in 30 larger box multiply by 10 ($14 \times 10 = 140$) if rate >125 it called Rapid Ventricular Rate(RVR)

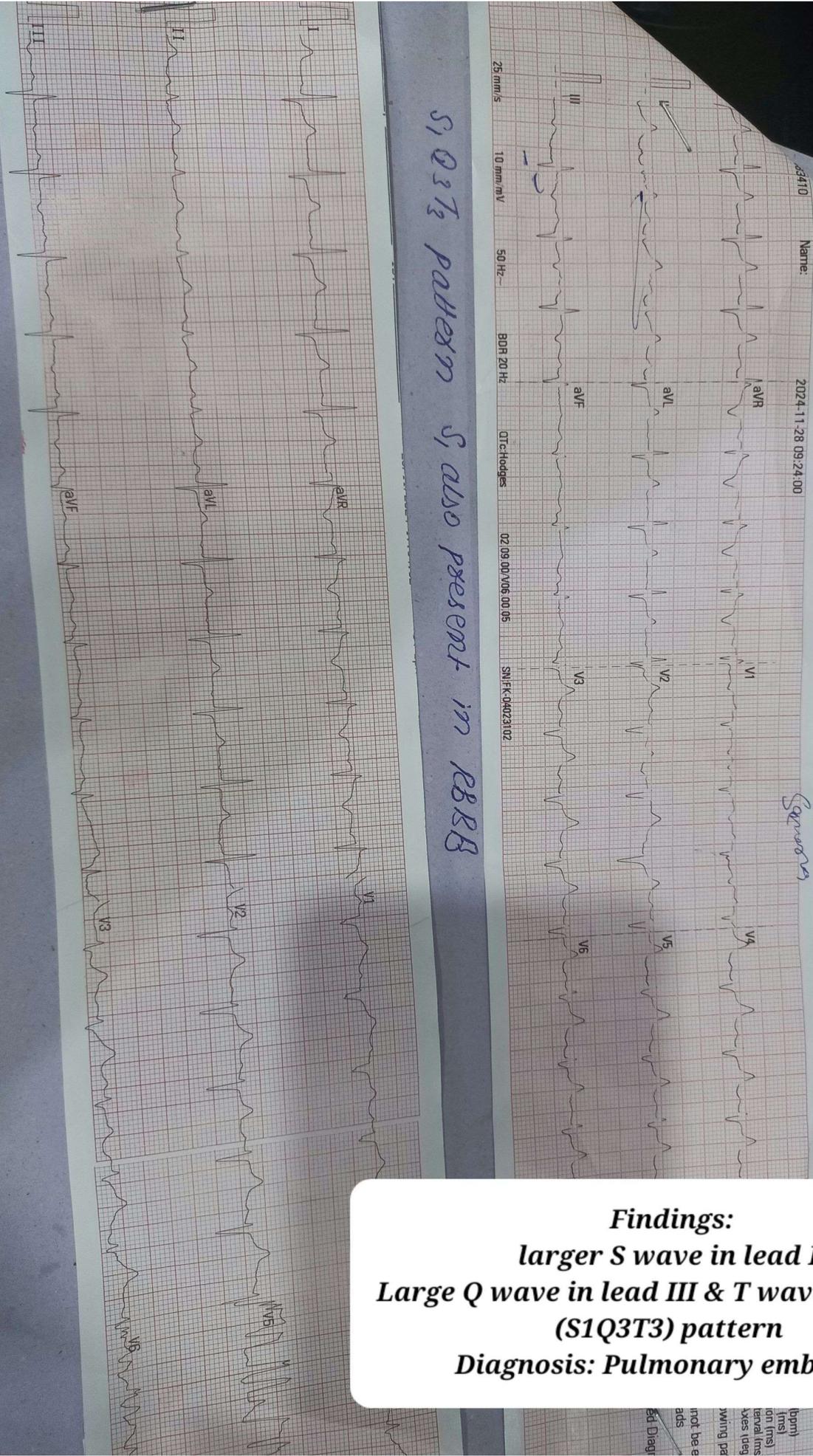
Diagnose: Atrial fibrillation with RVR



supraventricular Tachycardia

- narrow QRS complex → Diagnosed (SVT)
 - Rate regular
 - Absent of P waves
- Treatment
- ① Adenosine (if available)
 - ② Calcium channel blockers (verapamil, diltiazem)
 - ③ Beta blockers (metoprolol)

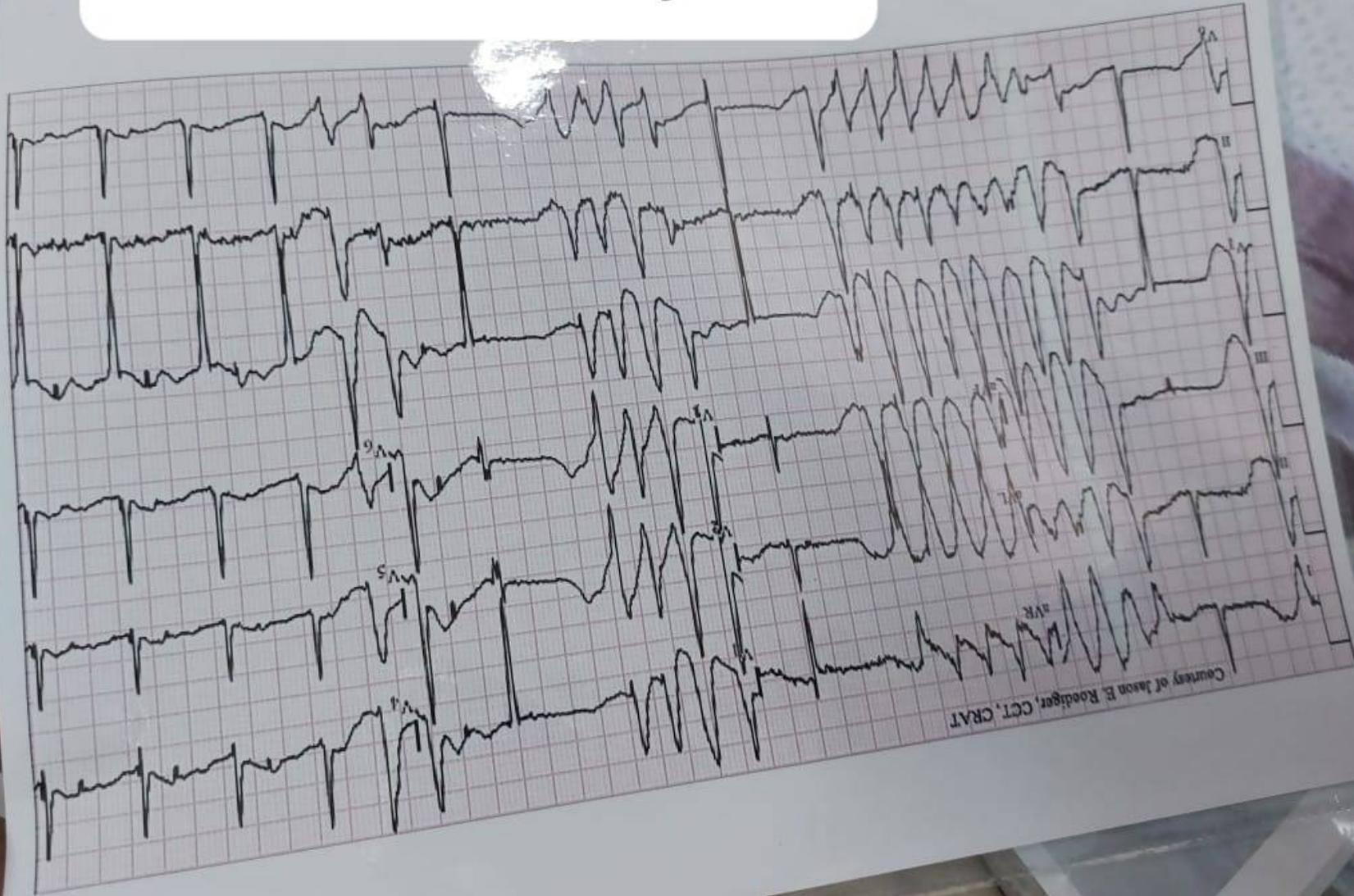




S1Q3T3 pattern, also present in RBBB

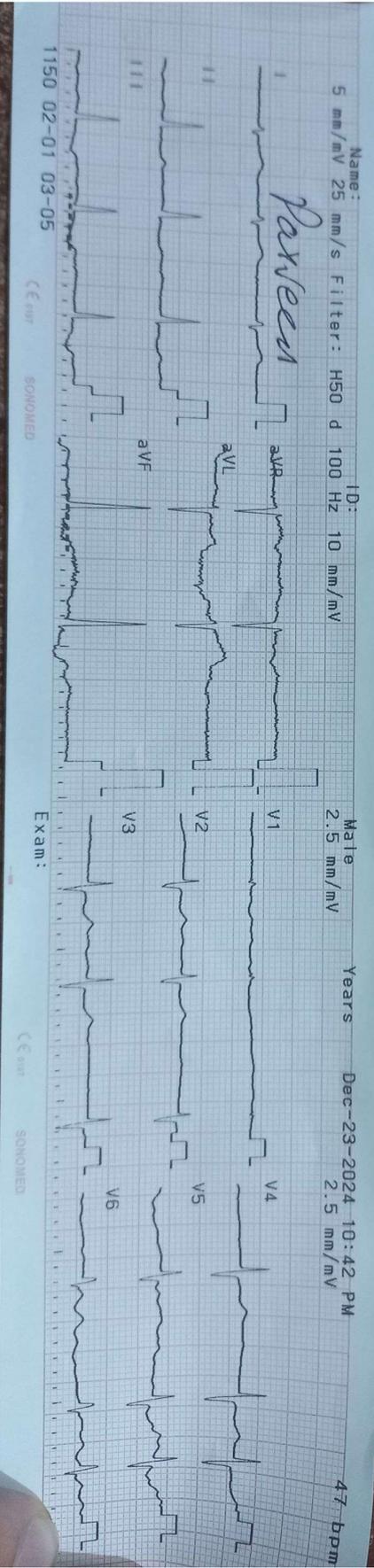
Findings:
larger S wave in lead I
Large Q wave in lead III & T wave inversion
(S1Q3T3) pattern
Diagnosis: Pulmonary embolism

Non sustain ventricular Tachycardia

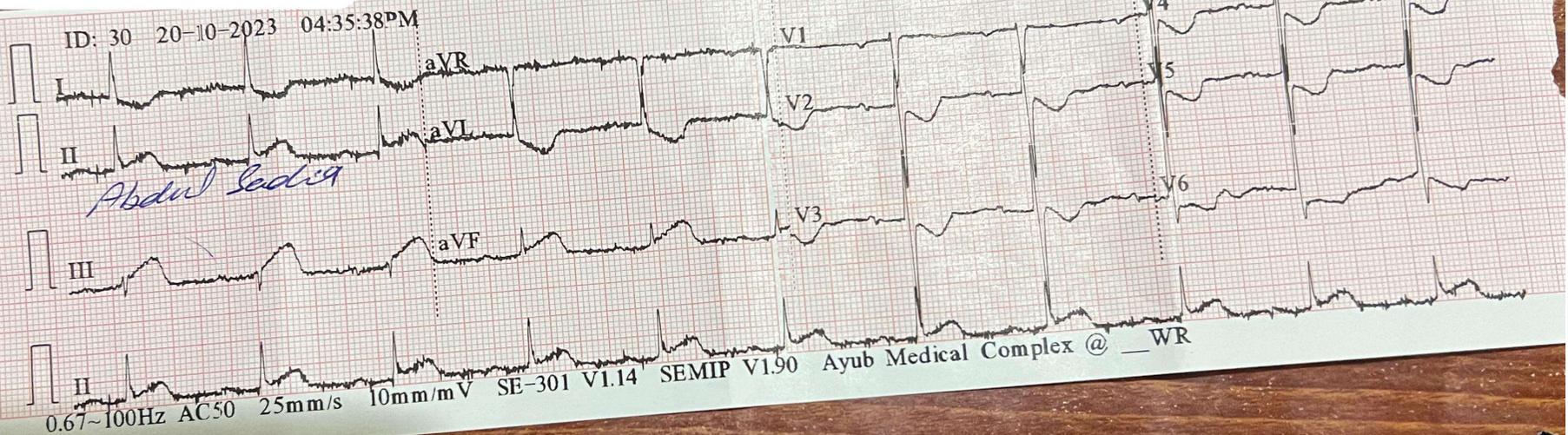


Courtesy of Jason E. Roodiger, CCT, CRAF

Atrial Fibrillation with control Heart Rate

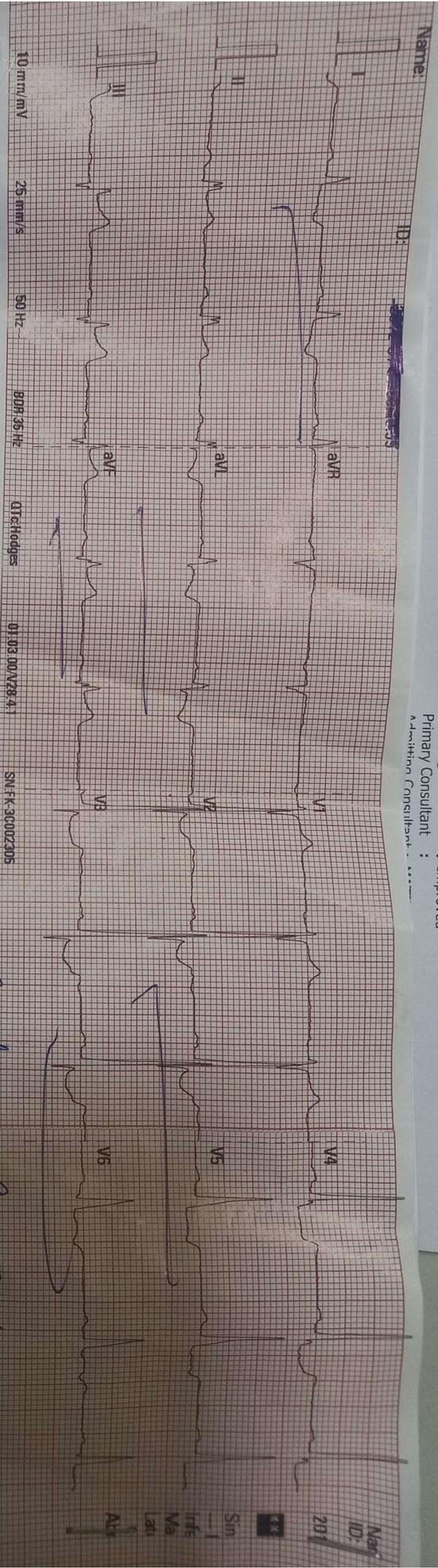


**ST elevation in 2,3 and avF (IWMI)
V2 & V3 R>S and ST Depression (PWMI)**



Name:
 Age : Male
 Weight(kg) : 68 Year(s)
 Address : po shalkhan medan Palas Pakistan
 City : Palas , Pakistan
 Person Phone :

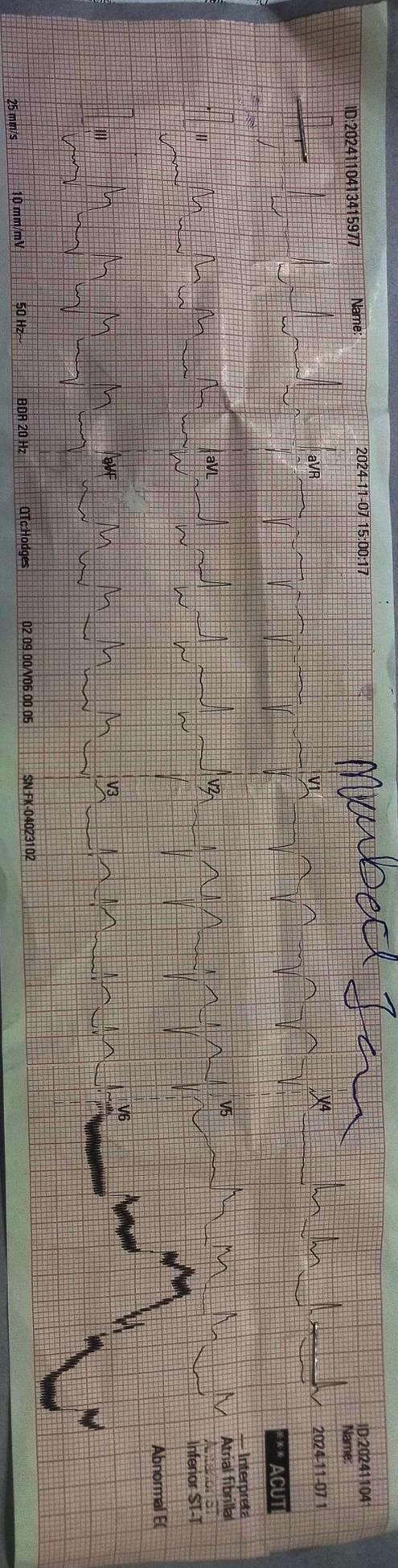
Admission No : K0424000088952
 Admission Date : 09-NOV-2024 02:42:16
 Admission Status : Elective
 Discharge No :
 Discharge Date : 09-NOV-2024 03:08:34
 Discharge Status : Improved
 Primary Consultant :
 Admission Consultant :



Muridar 9-11-2024

Inferio - posterior wall MI
 Lead II, III, aVF ST-elevation
 Lead aVL ST depression
 Lead V2 & V3 ST depression
 Lead V4, V5, V6 ST depression
 For posterior wall MI & inferior MI
 For LVP (lead III ST more elevate than lead II
 V1, ST elevate & V2 ST-depression)

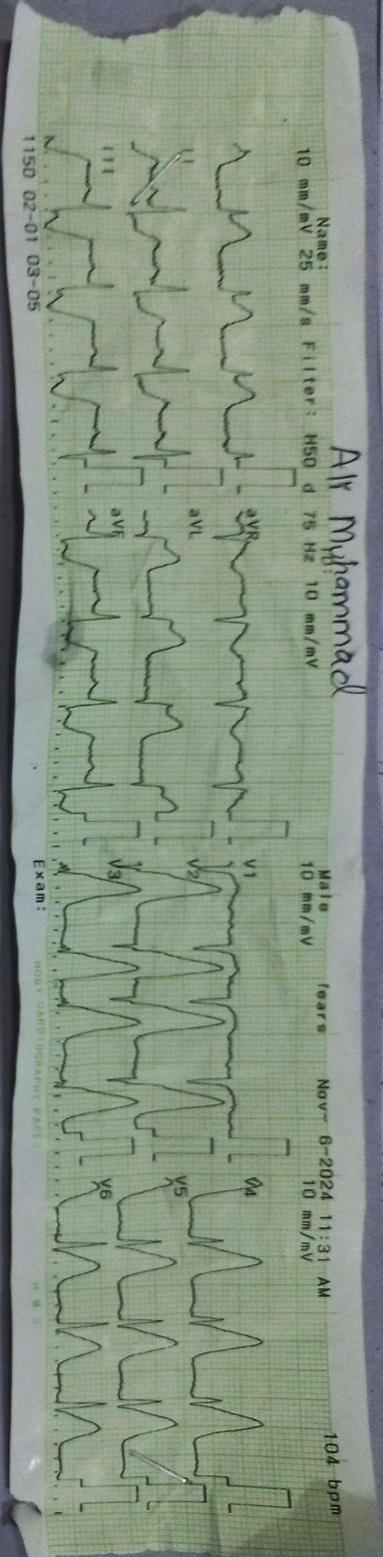
HMAD
 (Haematology) Associate
 DR. M. BASHARAT KHAN
 (Path) Assistant
 Prof. FCP
 M Phil (H)



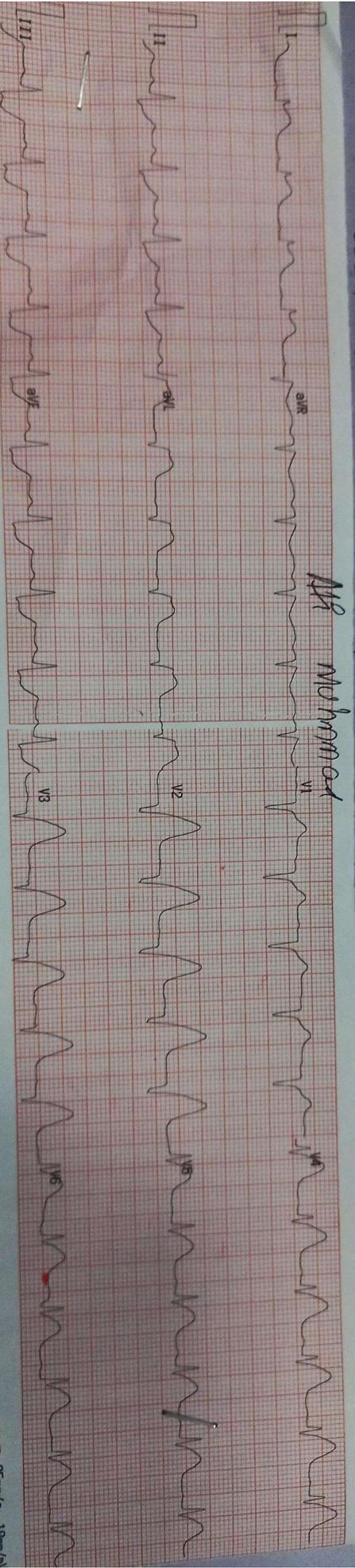
Number 1 in

ID: 202411041
 Name: 2024-11-07 15:00:17
 *** ACUTE ***
 Interpretation:
 Atrial fibrillation
 Anterior ST
 inferior ST-T
 Abnormal ECG

- lead II, III, aVF → ST ~~low~~ elevation
 - lead I, aVL ST depression
 - lead III more elevation than lead II (RV infarct)
 - V4 elevation & V2 depression than compressed RV infarct
 → irregular irregular most likely R-rib
 and patient also developed ischemic CVA

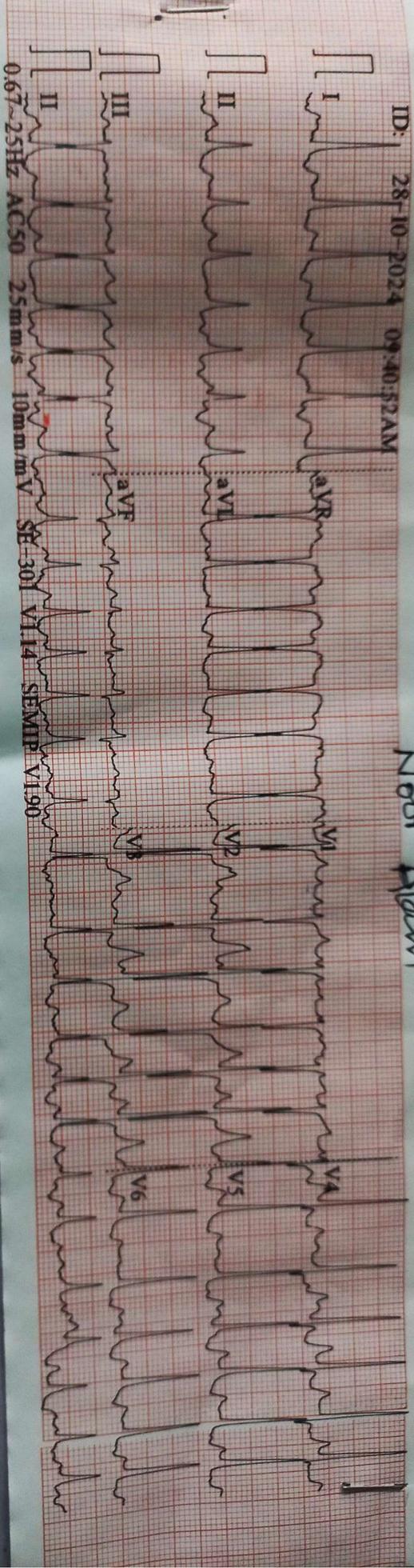


EXHENSIVE ANHESTIO-LATERAL WALL MI,
 LEAD I, V2, V3, V4, V5, V6 ST Elevation,
 LEAD II, III, aVF → Depression,
 Hypoxaemia
 T, wave



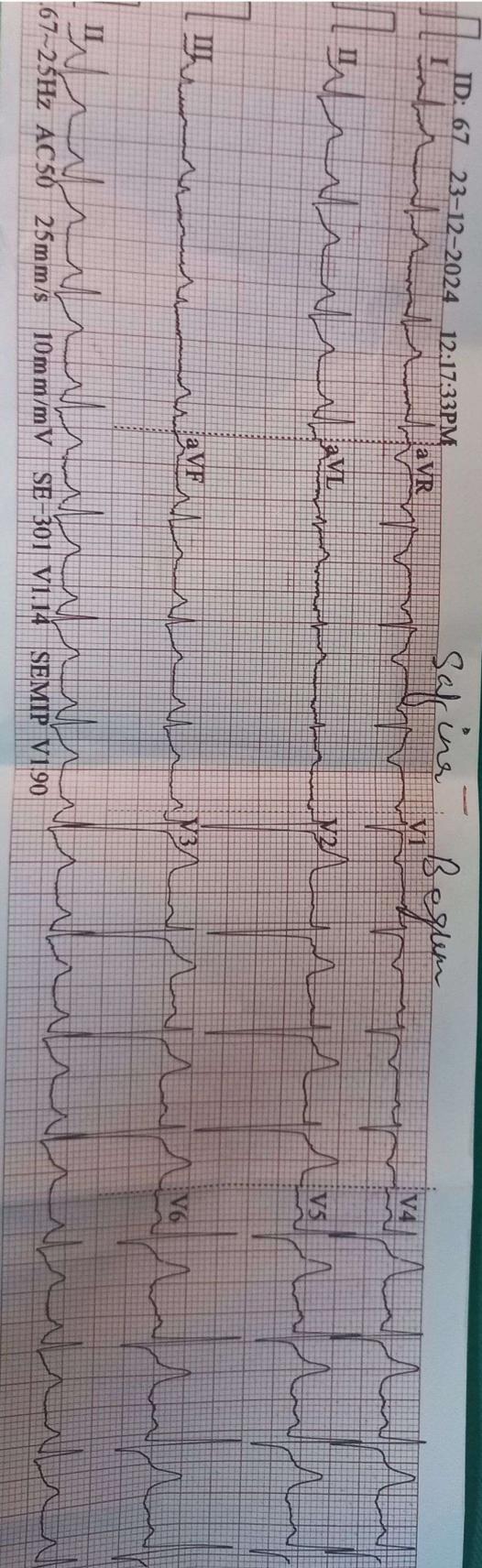
ID: 28-10-2024 09:40:52AM

NOOR ALAM



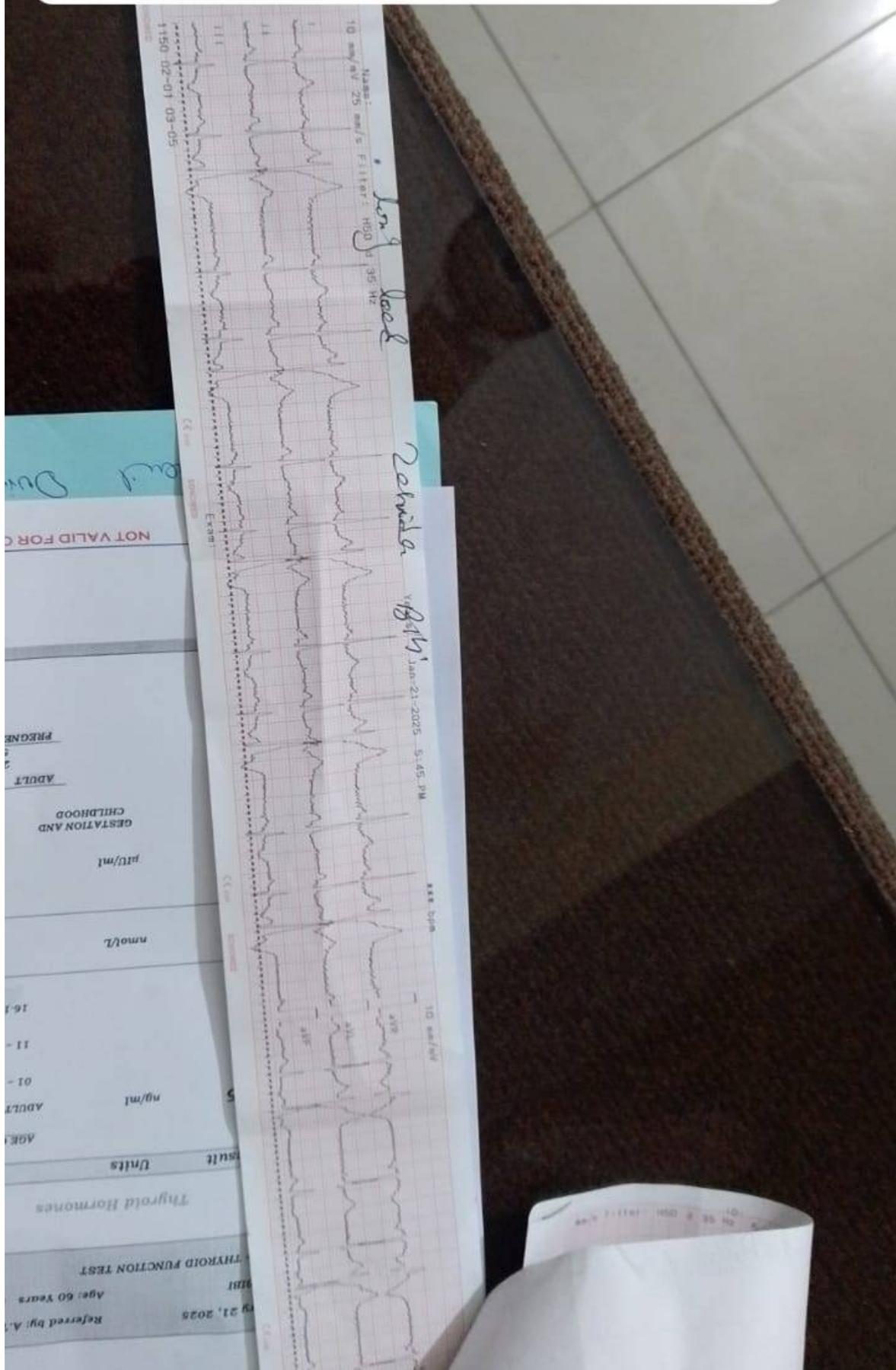
Atrial Flutter
Best seen in V1 & lead III

Findings:
lead II Triangle shape P wave and voltage greater than 2 small boxes
Diagnoses: P Pulmonale



P Pulmonale show right Atrial Hypertrophy & it occurs in conditions like Pulmonary Hypertension, COPD.

Rhythm lead (II) show Trigeminy PVC after every 2 normal sinus beats.



*Don't forget to love
yourself and be honest to
your's profession
specifically about care of
the patient. 😊*

*For any Questions about
Basic concepts of EKG,s
you can contact me on
WhatsApp 03038803226.*

Thank you