# Case 1

- A male pt of age 25 yrs was brought to hospital after an episode of collapse while playing football

- Pt had an episode of syncope while playing football preceded by lightheadedness,regains consciousness after 2 min
- no h/o any prior injury/vomitings/seizure.
- No h/o exertional dyspnoea
- No h/o palpitations,exertional chest pain,angina
- No h/o cough,orthopnea,paroxysmal nocturnal dyspnoea

- No h/o any pedal odema or facial puffiness
- No h/o suggestive of rheumatic heart disease
- Past H/O of similar attack followed by cardiac arrest 3mnths back admitted to care hospital cpr was done and revived
- Not a known case of diabetes,hypertension,t.b,epilepsy,rheumatic fever,asthma,cad,cva,rheumatic heart disease
- Family history-h/o of sudden death of paternal uncle at 30yrs of age

- Diet-mixed
- Appetite-normal
- Bowel/bladder-regular
- Addictions-occasional smoker
- Drug h/o-is on amidarone 200mg b.d,and propanolol 80mg bd since 3 months
- No known allergies

O/e-pt is well built and well nourished

- Is conscious,cooperative,coherent and well oriented to time,place and person
- Temp-afebrile
- Pulse-80/min ,pulses jerky

  all peripheral pulses felt,no radio radial radio-femoral delay
- b/p-130/80 in both arms in sitting posture

  on lying down 120/80
- r/r-18/min regular

- GRBS-112mg/dl
- Spo2-100%at room air
- Pedal odema-
- Clubbing-
- Cyanosis-
- Icterus-
- Lymphadenopathy-

CVS examination-

- inspection-shape and size of precordium is normal
- No scars and sinuses
- Position of apex beat-in $5^{th}$ intercoastal space 9cms lateral to mid sternal line
- No engorged veins or pulsations over precordium

## Palpation

- All inspectory findings confirmed
- double apical impulse,hyper dynamic in nature
- No thrills
- No parasternal heave

Auscultation

S1 s2 heard

S4 heard

mid systolic murmur heard in lower left sternum border 4$^{th}$ intercoastal space increasing with valsalva manoeuver and standing

- Respiratory system

  b/l air entry +

  Chest clear
- Abdomen- soft

  no organomegaly
- CNS – higher mental functions-N
  - no focal neurological deficit

Working diagnosis-

- Mitral regurgitation

  due to 1 Hypertropic cardiomyopathy

  2Rheumatic heart disease

  3 dilated cardiomyopathy

- Ischaemic heart disease

# INVESTIGATIONS

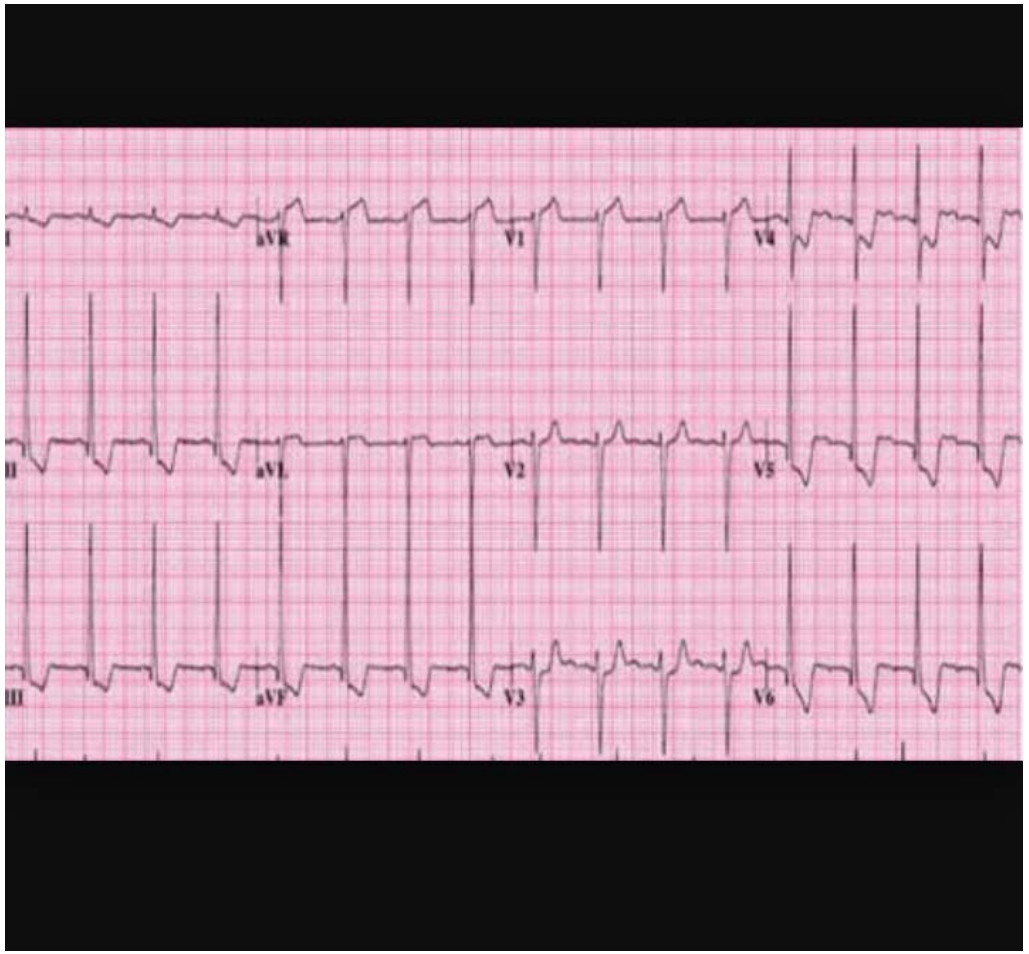
- CBP-Hb%-10.8 gm/dl
  TLC-6,000/cu mm
  Platelet count-2.4lakhs

- CUE-RBC-nil
  pus cells-2-4
  albumin-trace
  sugar-nil

- Rft- urea-40
  creatinine 0.9
  Na-132
  k-4.0
  cl-110
- Lft-bilirubin-1.2
  ast-20
  alt-32
  alk phosphatase-150
  proteins-3.6

- Ecg showing  ST-T depressions with marked T wave inversions in the lateral precordial lead(V2-V6) with occasional pvcs
- Trop-I negative
- Ckmb-with in normal limits

Ecg showing  ST-T depressions with marked t wave inversions in the lateral precordial lead(V3-V6)



HIV-non reactive

- HbsAg-negative
- HCV-non reactive
- USG Abdomen-no sonological abnormality
- Chest x ray-normal

- 2d echo-

  ejection fraction 30%

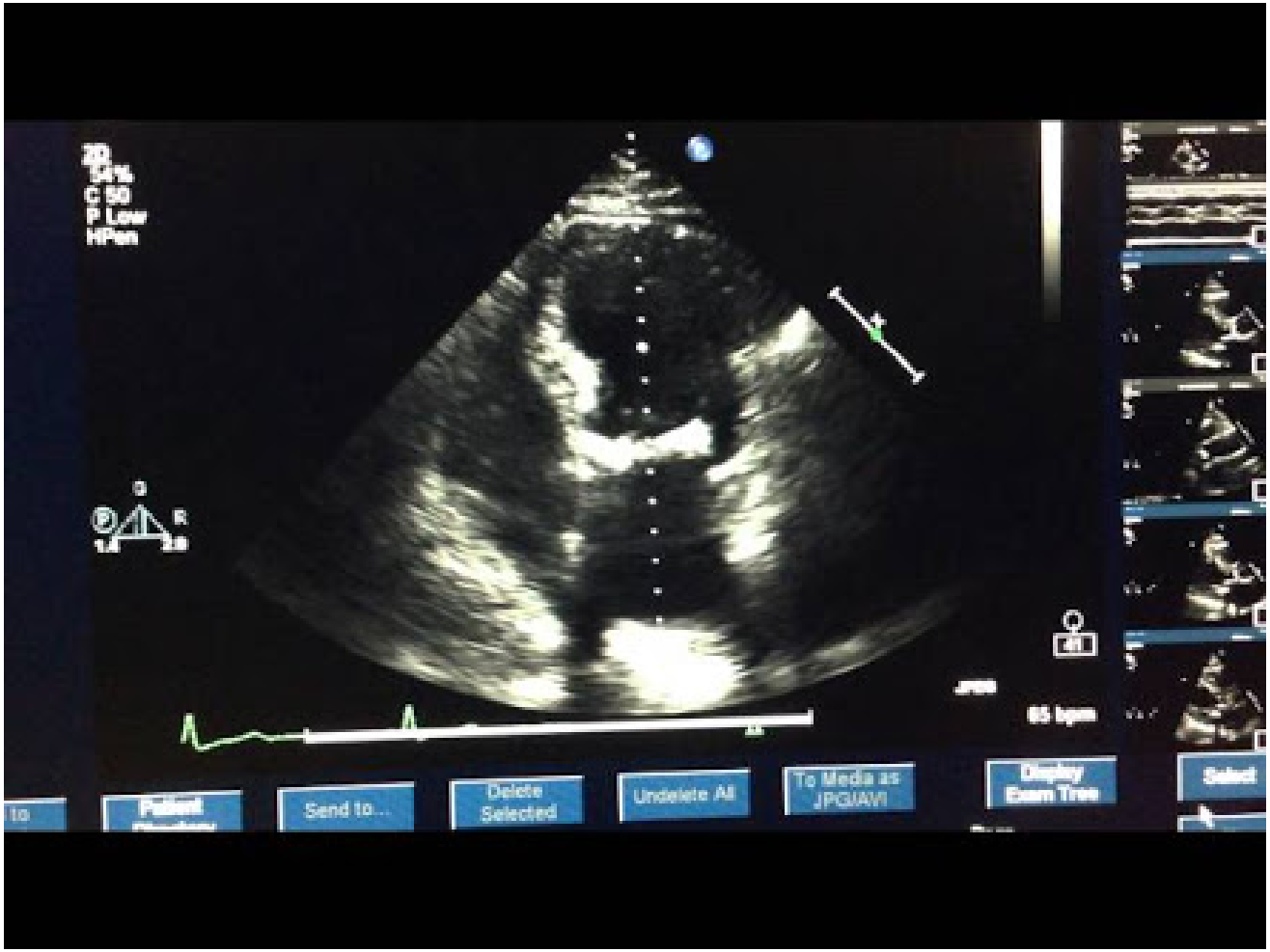
  septal thickness-asymmetric,max 30mm

  lv end diastolic cavity dimension <55mm

  diastolic dysfunction+

  left atrium-min dilatation

  rt atrium/ventricle-n size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65 bpm
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Diagnosis-

- Hypertrophic cardiomyopathy

- Treatment

  Tab.amiodarone 200mg b.d

  referal to higher centre for intra cardiac defibrillation device

- Risk stratification-
    - Recurrent syncopal attacks
    - Family h/o sudden cardiac death
    - Massive LVH,septal thickness 30mm
- Patient is high risk for sudden cardiac death and pt advised to get intra cardiac defibrillator

# Case 2

- A male pt of age 30 yrs came with chief complaints of episode of syncopal attack and dizziness repeatedly

- pt had an episode of syncope and dizziness while playing cricket,repeated attack
- h/o exertional dyspnoea NYHA 2
- no h/o any prior injury/vomitings/seizure
- No h/o palpitations,exertional chest pain,angina
- No h/o cough,orthopnea,paroxysmal nocturnal dyspnoea

- No h/o pedal odema or facial puffiness
- history of  similar attack last yr while playing cricket
- Not a known case of diabetes,hypertension,t.b,epilepsy,rheumatic fever,asthma,cad,cva,rheumatic heart disease
- Family history-h/o of sudden death of paternal uncle at age 30 yrs

- Diet-mixed
- Appetite-normal
- Bowel/bladder-regular
- Addictions-none
- Drug h/o-not significant
- No known allergies

- o/e-pt is moderately built and well nourished
- Is conscious,cooperative coherent and well oriented to time,place and person
- Temp-afebrile
- Pulse-73/min ,pulses jerky

  all peripheral pulses felt,no radio radial radio-femoral delay
- b/p-120/80 in both arms in sitting posture

  on lying down 110/80
- r/r 18/min regular

- Pedal odema+
- Clubbing-
- Cyanosis-
- Icterus-
- Lymphadenopathy-

CVS examination-

- inspection-shape and size of precordium is normal
- No scars and sinuses
- Position of apex beat-in $5^{th}$ intercoastal space 9cms lateral to mid sternal line
- No engorged viens,pulsations over precordium

Palpation

- All inspectory findings confirmed
- Bifid apical impulse hyper dynamic in nature
- No thrills
- No parasternal heave

Auscultation

S1 s2 s3heard

pan systolic murmur heard in lower left sternum border 5$^{th}$ intercoastal space increasing with valsalva manoever and standing

- Respiratory system

  b/l air entry +

  scattered crackles over the chest
- Abdomen- soft

  no organomegaly
- Cns – higher mental functions-N

  no focal neurological deficit

Working diagnosis-

- Mitral regurgitation

  due to 1 Hypertropic cardiomyopathy

  2 Rheumatic heart disease

  3 dilated cardiomyopathy

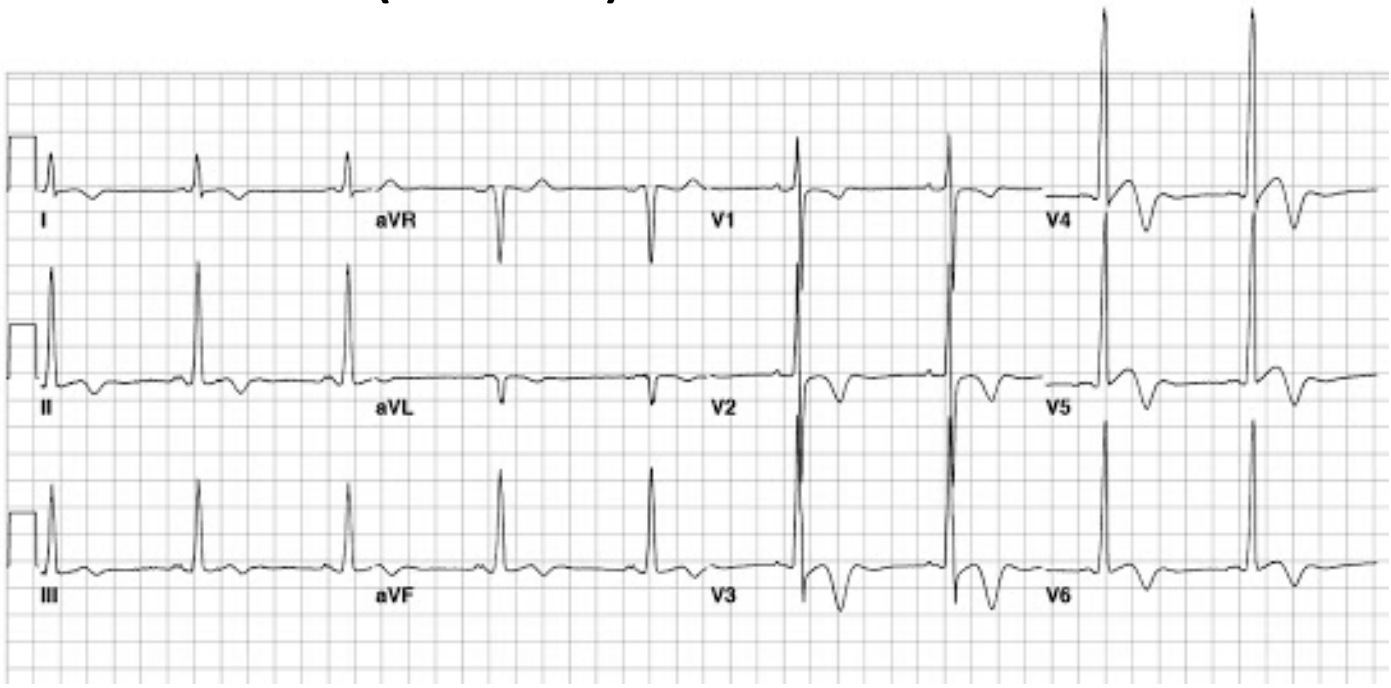
# INVESTIGATIONS

- CBP-Hb%-14 gm/dl
  TLC-7,000/cu mm
  Platelet count-2.5lakh
- CUE-RBC-nil
  pus cells-1-3
  albumin-trace
  sugar-nil

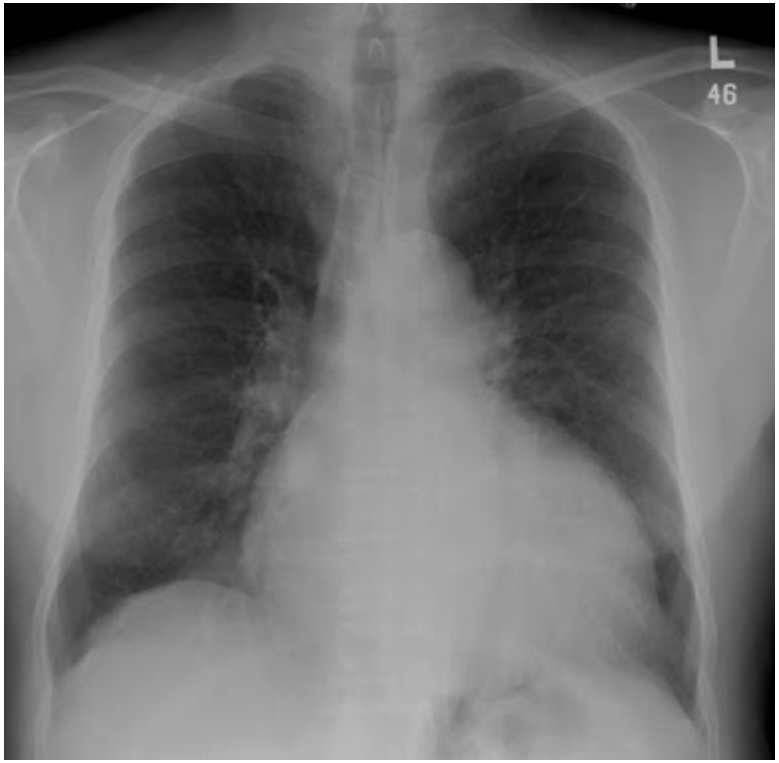
- RFT-Urea-36mg/dl
  creatinine-1.2mg/dl
- Sr electrolytes
  sodium-142mmol/l
  potassium-3.8
  chloride-101
  calcium -8.2
  phosphorus-4.1

- LFT- total bilirubin-4.35
  direct bilirubin-2.32
  sgot-22
  sgpt-46
  ALP-278
  albumin-2.4
- PT-18sec
- APTT-35sec
- Trop-I negative
- Ckmb-wnl

Ecg showing LVH,ST-T depressions with marked t wave inversions in the lateral precordial lead(V2-V6)



# Chest x ray



- 2d echo-ejection fraction 55%

  septal thickness-asymmetric,max 30mm

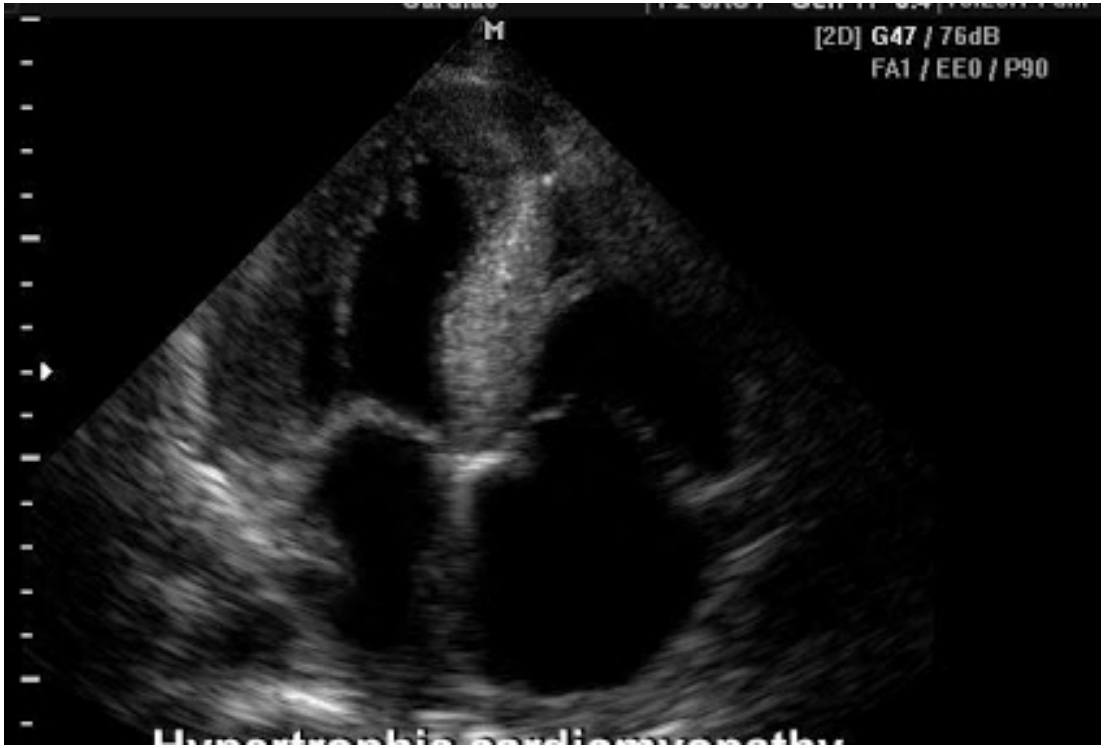
  outflow obstruction >70%

  lv end diastolic cavity dimension<45mm

  diastolic dysfunction+

  rt/left atrium-n size

  rt ventricle-n size


M
[2D] G47 / 76dB
FA1 / EE0 / P90

- Diagnosis- HOCM(complicated by)

  LVH

  Left ventricular outflow obstruction

- Risk stratification-
    - Recurrent syncopal attacks
    - Family h/o sudden cardiac death
    - Massive LVH,septal thickness 30mm,outflow obstruction>70%
- Patient is high risk for sudden cardiac death and pt referred to higher center to undergo myomectomy

# Case 3

- A male pt of age 22 yrs came for health check up for regular sport activities

- No h/o any syncopal attacks
- No h/o exertional dyspnoea
- No h/o palpitations,exertional chest pain,angina
- No h/o cough,orthopnea,paroxysmal nocturnal dyspnoea
- No h/o pedal odema or facial puffiness
- No history suggestive of rheumatic heart disease

- Not a known case of DM,HTN,t.b,epilepsy,rheumatic fever,asthma,cad,cva,rheumatic heart disease
- Family history-h/o diagnosed case of hcm 1st cousin
- Diet-mixed
- Appetite-normal
- Bowel/bladder-regular
- Addictions-none
- Drug h/o-not significant
- No known allergies

- o/e-pt is moderately built and well nourished
- Is conscious,cooperative,coherent and well oriented
- Temp-afebrile
- Pulse-70/min regular,pulses jerky

  all peripheral pulses felt,no radio-radial,radio-femoral delay
- B/p-120/80 in both arms in sitting posture

  110/80 on lying down

- Pedal odema-
- Clubbing-
- Cyanosis-
- Icterus-
- Lymphadenopathy-

CVS examination-

- inspection-shape and size of precordium is normal
- No scars and sinuses
- Position of apex beat-in $5^{th}$ intercoastal space 9cms lateral to mid sternal line
- No engorged viens,pulsations over precordium

Palpation

- All inspectory findings confirmed
- double Apical impulse hyper dynamic in nature
- No thrills
- No parasternal heave

Auscultation

S1 s2 heard

mid systolic murmur heard in lower left sternum border 4$^{th}$ intercoastal space increasing with valsalva manoever and standing

- Respiratory system

  b/l air entry +

  Chest clear
- Abdomen- soft

  no organomegaly
- CNS – higher mental functions intact

  no focal neurological deficit

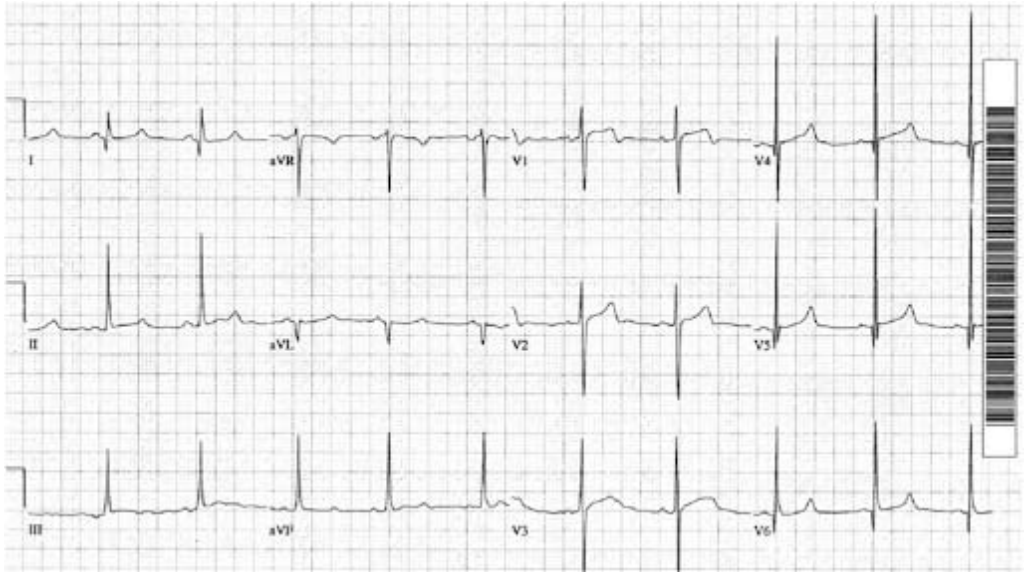
# INVESTIGATIONS

- CBP-Hb%-13.2 gm/dl
  TLC-4,800/cu mm
  Platelet count-2.6lakh
- CUE-RBC-nil
  pus cells-2-4
  albumin-trace
  sugar-nil

- Rft- urea-40
  creatinine 0.9
  Na-132
  k-4.0
  cl-110
- Lft-bilirubin-1.2
  ast-20
  alt-32
  alk phosphatase-150
  proteins-3.6

- HIV-non reactive
- HbsAg-negative
- HCV-non reactive
- ESR-18mm
- USG Abdomen-no sonological abnormality detected
- Chest x ray-normal

Ecg showing trace with in normal limits



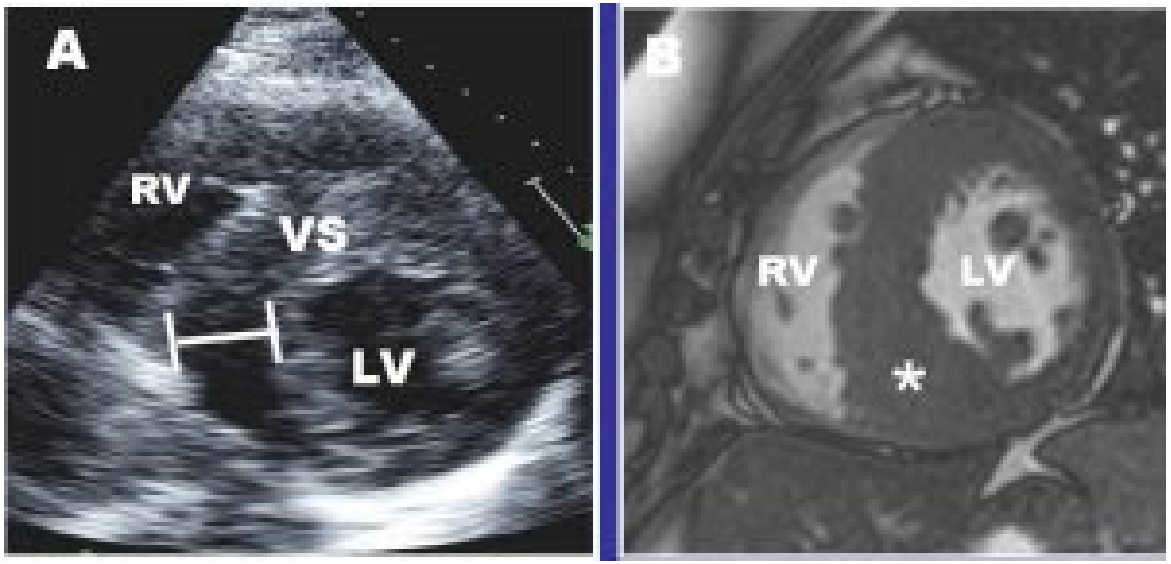
- 2d echo-ejection fraction 40%

  septal thickness-asymmetric,max 18mm

  lv end diastolic cavity dimension normal

  rt/left atrium-n size

  rt ventricle-n size


A
RV
VS
LV
B
RV
LV
*

- Diagnosis- Hypertrophic cardiomyopathy

Treatment

- Tab.metoprolol 12.5mg od
- Advised not to participate in competetive sports
- And for regular follow up