ESIM Winter School 2014
Case Presentation

Hacettepe University School of Medicine
Ankara/Turkey

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PATİENT

- D.G, 66 years old, female, married with 3 child, unemployed, place of birth/ residence: Ankara (Capital of Turkey)

- Chief complaints: Dyspnea (no sputum, no cough), fever (no spesific patern), rarely mild abdominal pain

HİSTORY OF PREVİOUS DİSEASES;

- Hypertension for 10 years
- Atrial Fibrillation
- Chronic Renal Disease with unknown etiology
- Coronary Angiography; no significant stenosis (1 year ago)
- Recurrent pericardial effusion >> pericardiopleural window operation (1 year ago)
- Major depression and insomnia

FAMİLY HİSTORY;

- Her sister and brother has chronic renal disease

MEDİCATİONS ;

- Carvedilol 2x6,25 mg
- Ramipril 1x2,5 mg
- Acetilsalisilate 1x100 mg
- Furosemide 1x40 mg
- Pantoprazole 1x40 mg
- Calcitriol 1x0.25 mcg
- Mirtazapine 1x15 mg
- Sertraline 1x50 mg

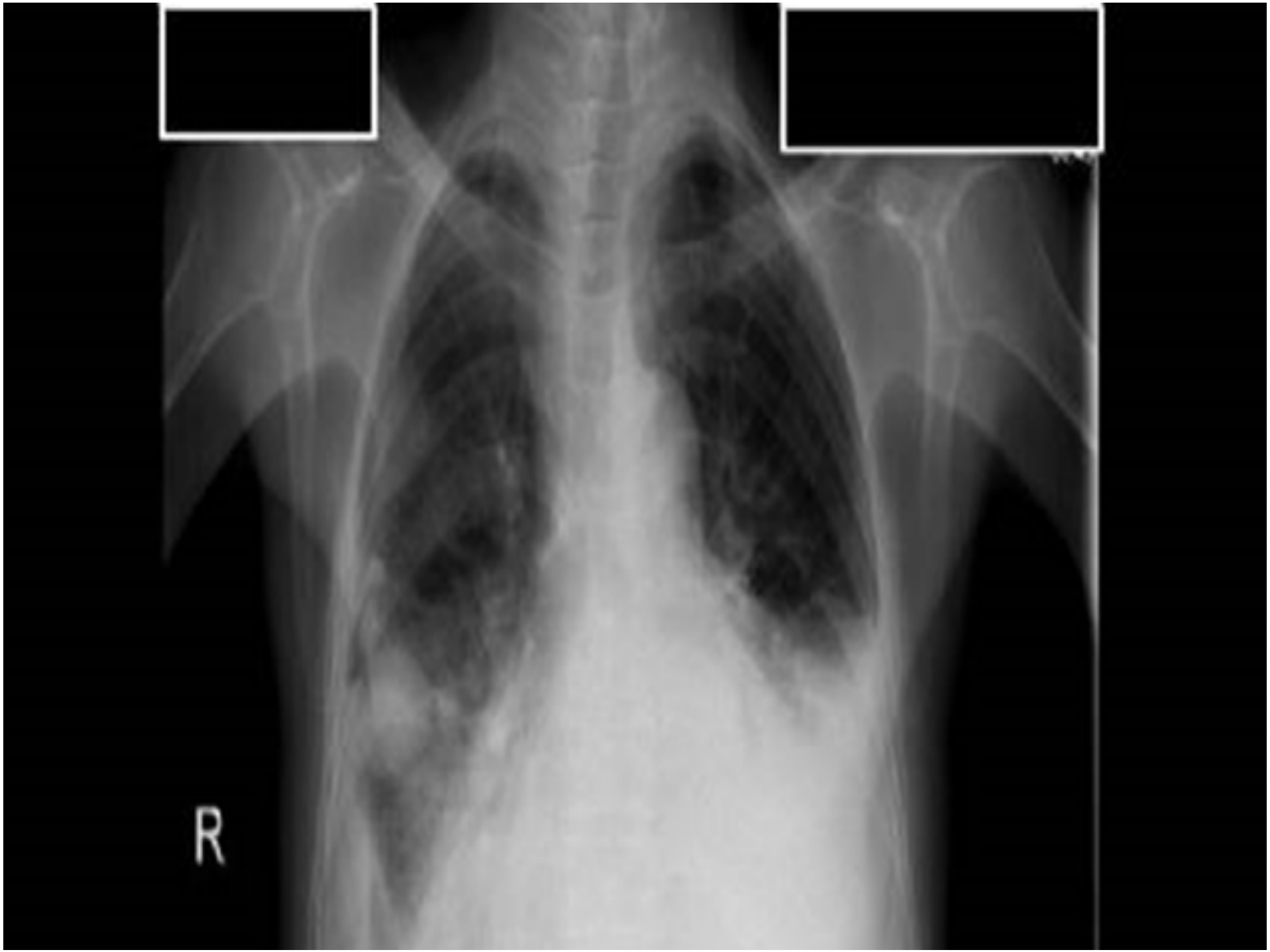
Physical Examination

- Height:1,60m Weight:42 kg BMI; 16.4
- Vital parameters; T:36,3^{o}C HR:74/dk RR:22/dk T: 100/70 mmHg SO2:89%
- Ears, eyes, skin: Normal
- Pulmonary System: End-inspiratuary cracles at the bazales , no ronchi
- Kardiyovascular system : Hard to hear hearth sounds, no murmur, no pretibial edema, no jugular venous distention
- Abdomen: Normal
- Neurologic system: Normal

WORK UP

- Hb: 12,7 g/dL, WBC:5060/uL, Plt: 154000/uL
- Creatinin; 1.62 mg/dl (up to 2.8 mg/dl) , urea; 77 mg/dl (N:10-50)
- Blood electrolytes; N
- Liver function tests ; N
- ESR: 62 mm/h
- CRP; 1.30 mg/dl >> Up to 8.37 mg/dl
- Ferritin; 51.1 ng/mL (11 – 307)
- ELISA test; HBsAg **N**-0.21, Ant-HBs **N**-0.57 IU/mL 0 – 10, Ant-HCV **N**-0.06, Ant-HIV **N**-0.33
- Thyroid function tests; normal
- Blood – Urine cultures; N
- Effusion sample; exudate, culture: (-), Tuberculosis ARB / PCR: (-)
- 280 mg/d proteinuria

- Cardiac biomarkers; Negative
- Chest X-ray; pericardial-pleural effusion
- Echocardiography; EF:%50, PAP:45 mmHg, restrictive pattern, pericardial effusion (22 mm in posterior Wall)
- Torax CT; multiple calcific LAP (maximally 1 cm in diameter), diffuse pericardial effusion (maximally 26 mm in LV neighborhood)
- Abdomen CT; multiple calcific LAP (maksimally 7 mm in diameter), bilateral renal parenchyma became smaller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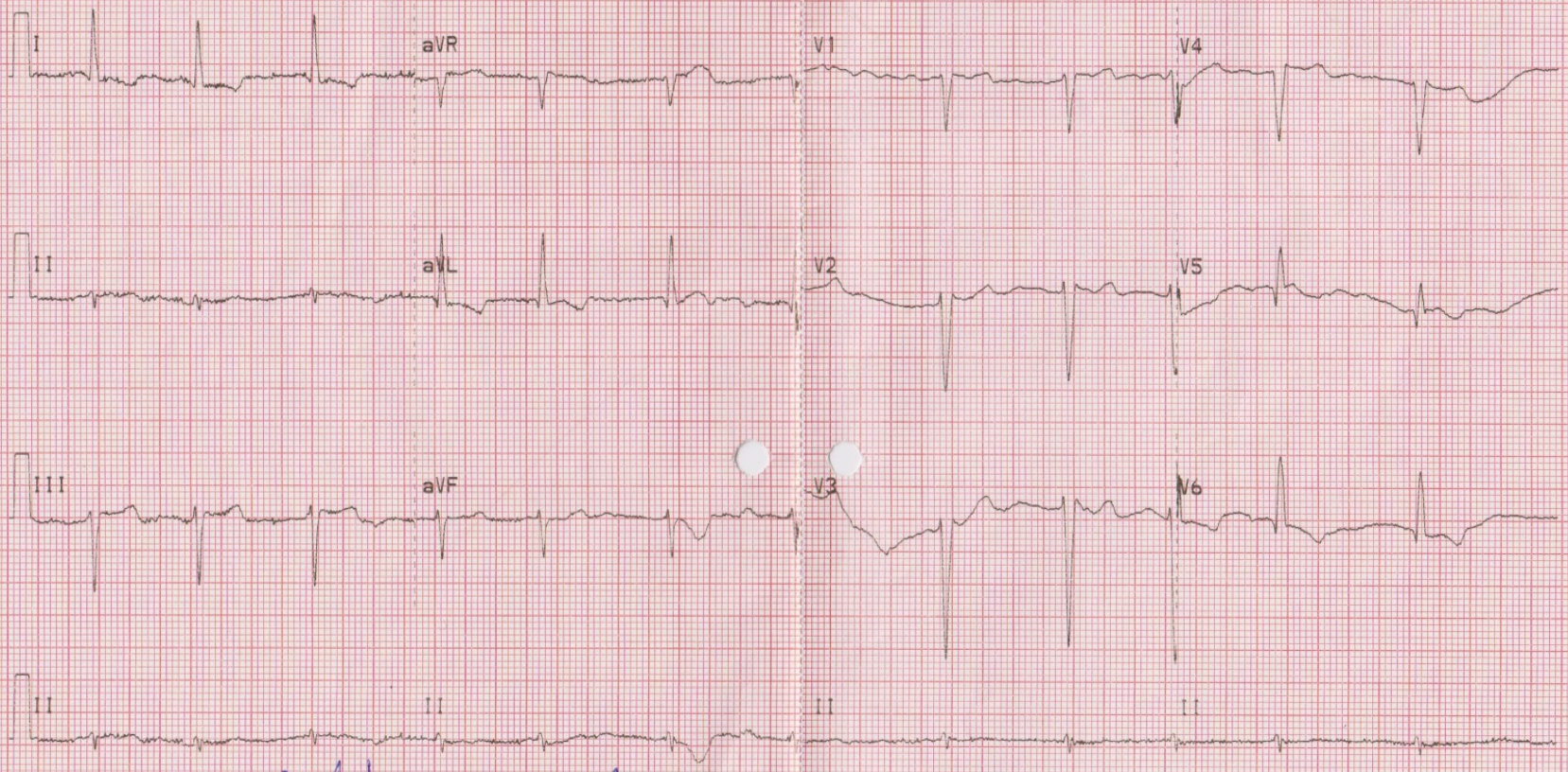
Vent. Rate:	75 bpm
P Duration:	
QRS Duration:	106 ms
PR Interval:	
QT Interval:	390 ms
QTc Interval:	416 ms
QT Dispersion:	28 ms
P-R-T AXIS:	° -31° 150°

10.10.12 7:00:48

ID: #121010062640

Atrial fibrillation
*** report made without knowing patient's sex or age ***
Left axis deviation - possible left anterior fascicular block
Possible old anterior infarct
Possible latera infarct - age undetermined
Inferior ST-T changes are nonspecific
Repolarization changes may be partly due to rhythm

Abnorma: ECG * Unconfirmed Analysis *



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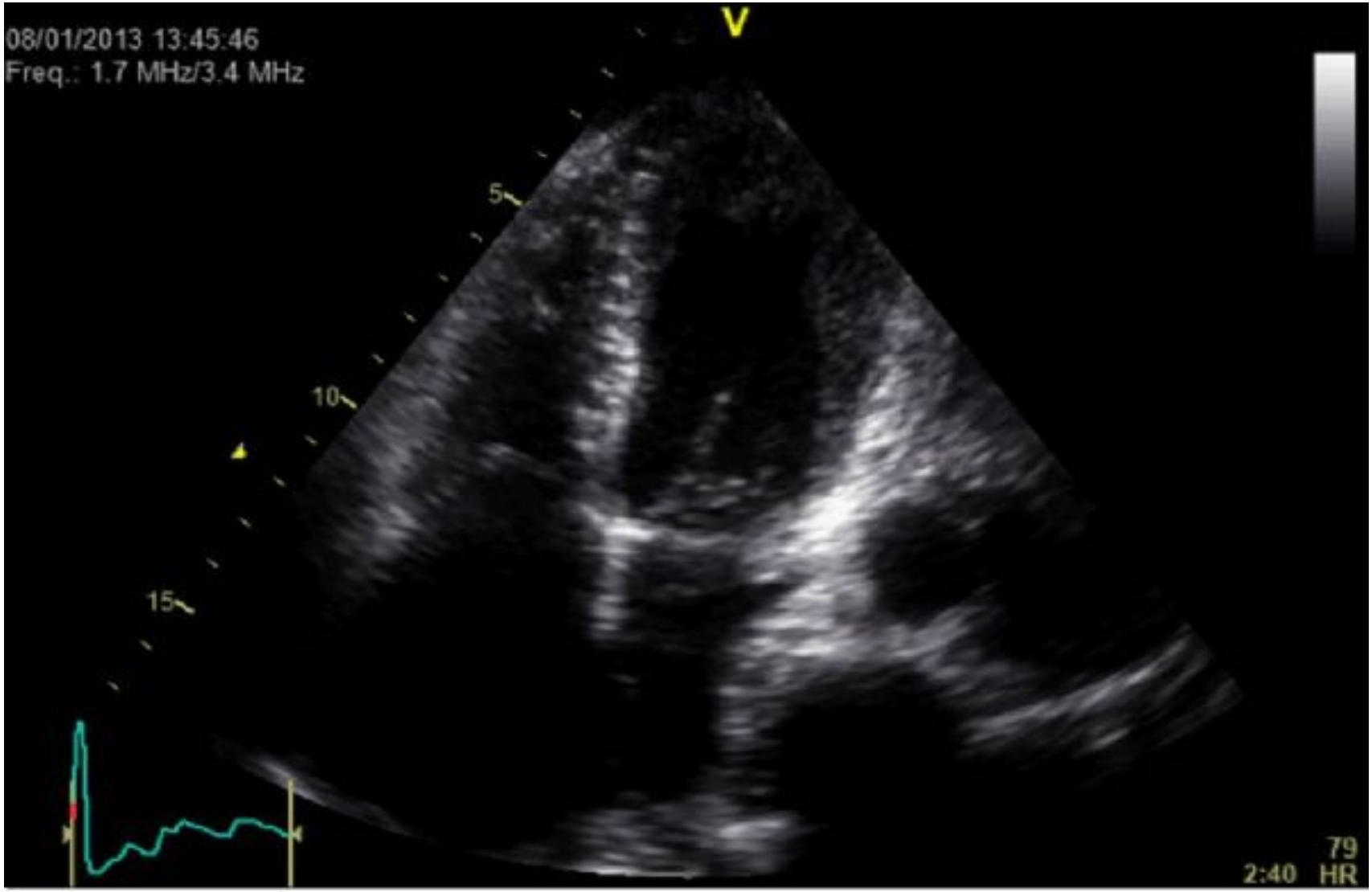
STABLE 40 Hz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- Dyspnea +
- Fever (Up to 39 C◦) +
- Recurrent Pericardial Effusions +
- Chronic Renal Disease
- ESR-CRP ↑
- Restrictive cardiomyopathy

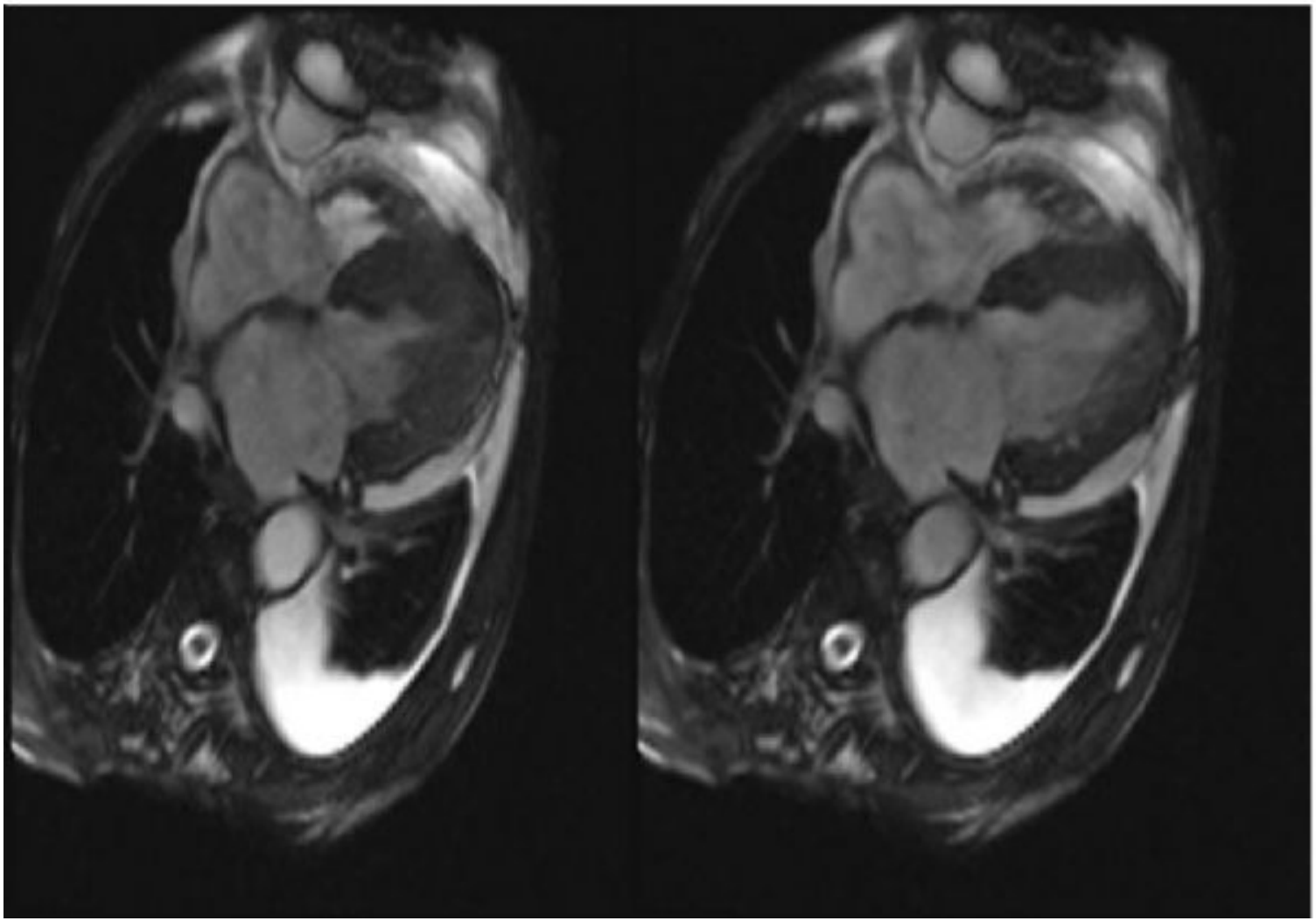
Differential diagnosis

- Pneumonia
- Tuberculosis
- Sarcoidosis
- Amiloidosis
- Multiple myeloma
- Brucella infection
- FMF and Other rheumatologic diseases

Further Evaluation

- Tumor markers; Negative except β2 microglobulin; **10059ng/mL** (609-2366)
- For malignancies; mammography ;N, Endoscopy-Colonoscopy;N, CT scans; no evidence of malignancy
- All multiple myeloma tests; Normal
- Bone marrow Bx; Blasts< %5, cells are normal, amyloid (-), cultures and TBC cultures are negative
- Quantiferon test : (+)
- Salivary Gland Bx; Normal
- FMF gene mutation ; (-)

- Brucella agglutination test; negative
- Rectum Bx; amyloid negative
- Cardiac MRI>>> ‘looks like restrictive cardiomyopathy , must be think about cardiac amiloidosis at first ’
- Pericardial Bx; mildly chronic inflammation & fibrosis
- Endomyocardial Bx; there is no sign of sarcoidosis and amyloidodis



- Her sister and brother has chronic renal disease !!

DİAGNOSİS ??

- FABRY DİSEASE

- Blood samples for fabry disease
- DNA sequence analysis >> Heterozygote F337S mutation +, a sign of fabry disease
- Treatment; Agalsidaz beta (Fabrazyme) every fifteen days
- After the treatment her effusion ve fever fall back…

Fabry Disease

- Fabry disease, also known as angiokeratoma corporis diffusum, ceramide trihexosidosis, or Anderson-Fabry disease
- X-linked glycolipid storage disease
- Deficient activity of the lysosomal enzyme alpha-galactosidase A
- Resulting in the accumulation of globotriaosylceramide in lysosomes in multiple cell types throughout the body
- While males are more severely diseased, most heterozygous females are also affected, though usually at a later age

- Clinical manifestations are variable and include cutaneous, corneal, cardiac, renal, and neurologic manifestations
- Other characteristic features include reduced sweating and the cutaneous lesions of angiokeratoma corporis
- Manifestations of renal disease include proteinuria and progressive renal insufficiency which sometimes results in end-stage renal disease.
- In adults, there is progressive cardiac, renal, and cerebral involvement (transient ischemic attacks and strokes), which are the major causes of death associated with Fabry disease.

- Many patients with cardiac involvement are asymptomatic, whereas others present with angina, dyspnea, palpitations, or syncope. Rare patients have advanced heart failure symptoms in the setting of unexplained LVH and generally normal left ventricular ejection fraction (LVEF).

CARDIOVASCULAR MANIFESTATIONS & TESTS

- Ventricular hypertrophy
- Myocardial fibrosis
- Valve disease
- Coronary artery disease
- Arrhythmias and conduction abnormalities
- Aortic dilation
- Hypertension
- Heart failure and other cardiovascular events

CARDIAC TESTS

- Electrocardiogram
- Cardiac biomarkers
- Echocardiogram
- Cardiac magnetic resonance
- Myocardial perfusion imaging
- Coronary angiography

Home Messages

- Fabry disease is a rare cause of fever of unknown etiology
- If the patient has family history of renal disease, fever and have cardiac disease you have to think about fabry disease
- For the diagnosis of Fabry disease; it MUST COME TO YOUR MIND…