

INFILTRATIVE DISEASE: A SIGNIFICANT CONTRIBUTING FACTOR TO NONISCHEMIC CARDIOMYOPATHY

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Introduction

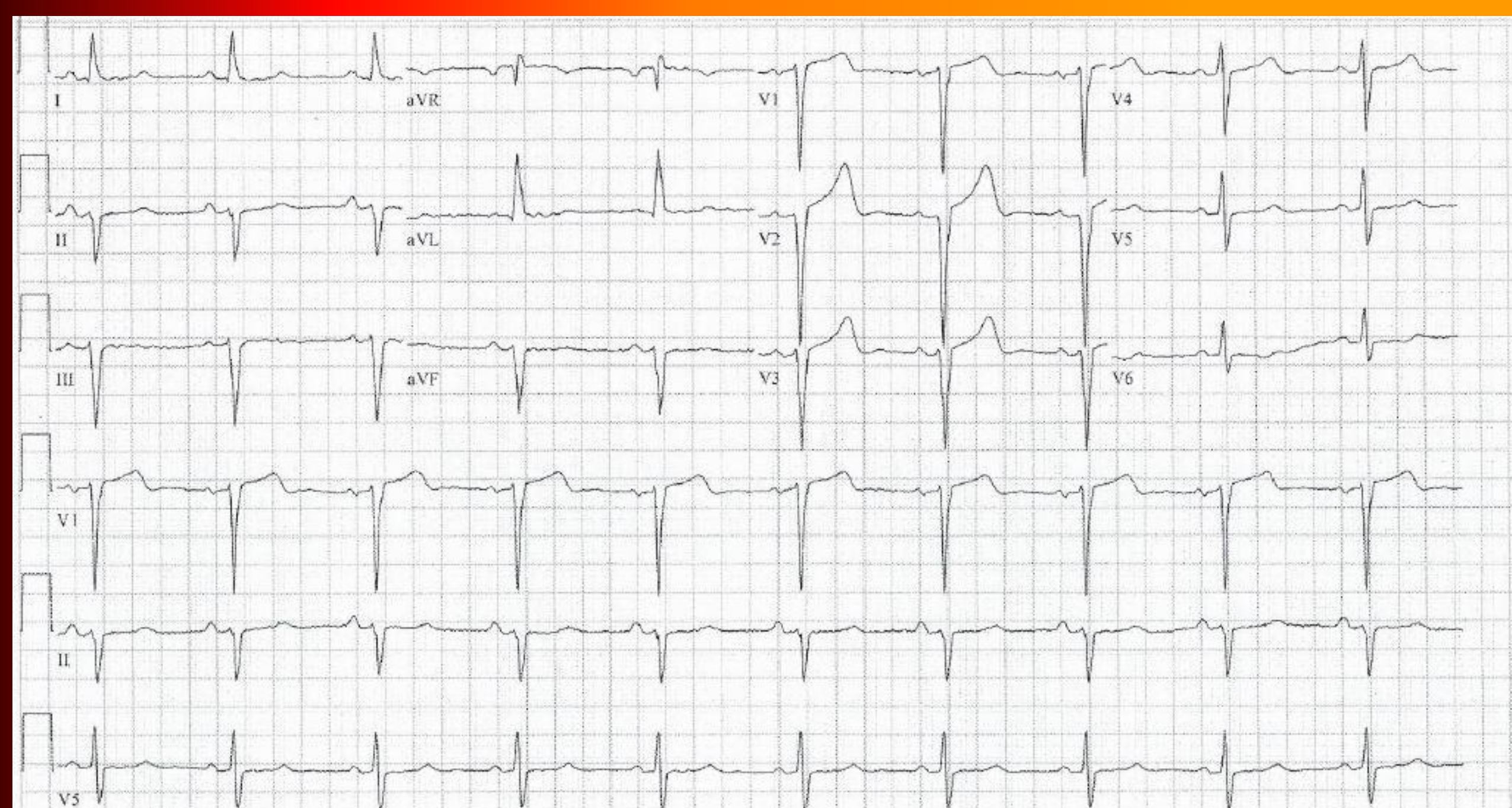
Cardiomyopathy is the major cause of heart failure, which is one of the leading causes of hospitalization, hospital readmission, and death. Cardiomyopathy is categorized into ischemic and nonischemic. Extensive investigation has been focused on ischemic cardiomyopathy, however an increasing number of cases of nonischemic cardiomyopathy have been recognized. The pathophysiology, particularly in infiltrative diseases, needs further investigation to mitigate and manage the progression of nonischemic cardiomyopathy

Patient case presentation

This is a 76 year old male with a medical history of hypertension and hyperlipidemia who presents with a gradual onset of shortness of breath and +1 pitting lower extremity edema. Patient's hypertension has been well-controlled with hydrochlorothiazide. Prior echocardiogram with findings of mild concentric left ventricular hypertrophy with ejection fraction of >55% and trace mitral regurgitation. His persistent symptoms inciting a cardiac workup with repeating echocardiogram.

Diagnostics

EKG



ECHO

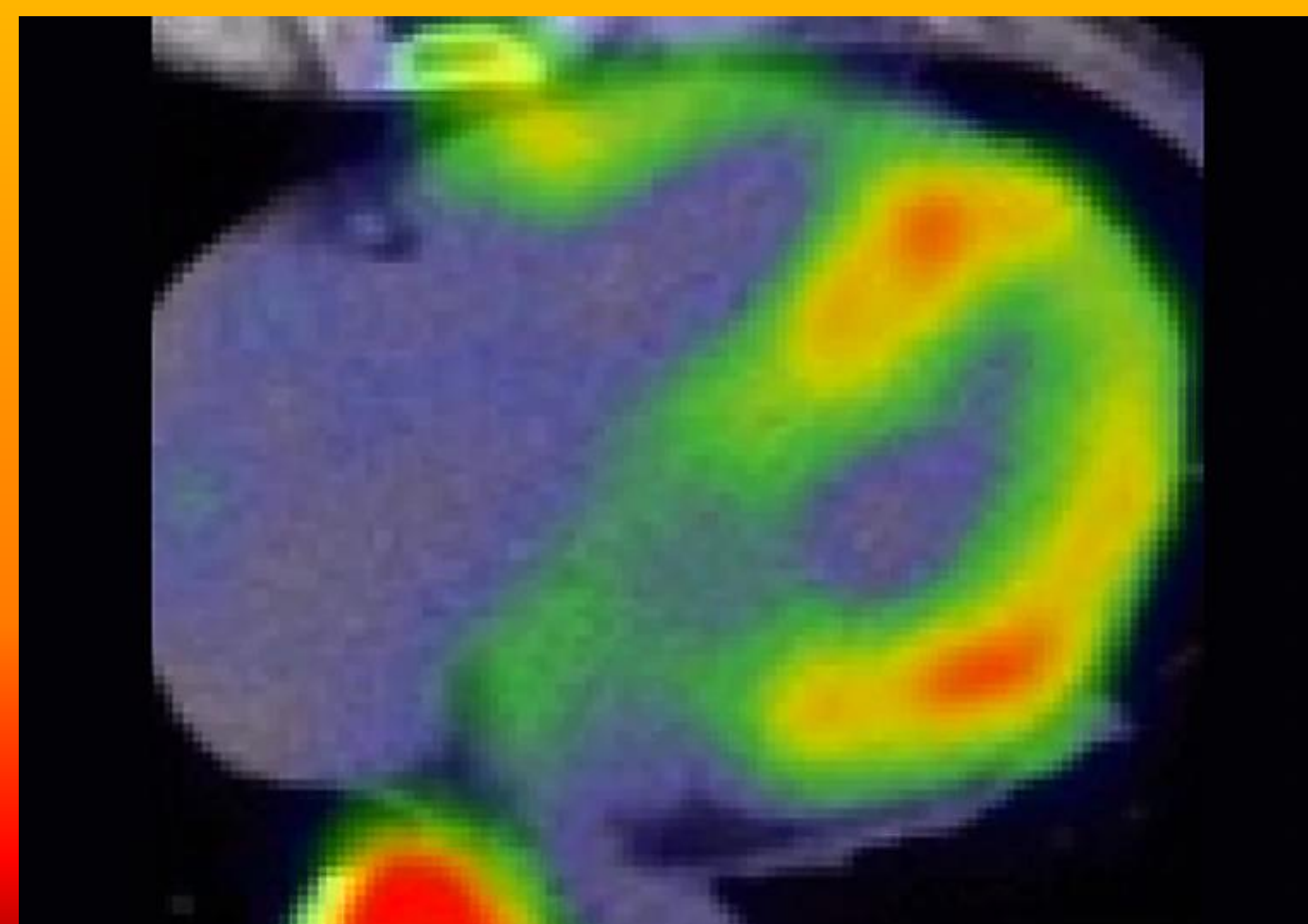
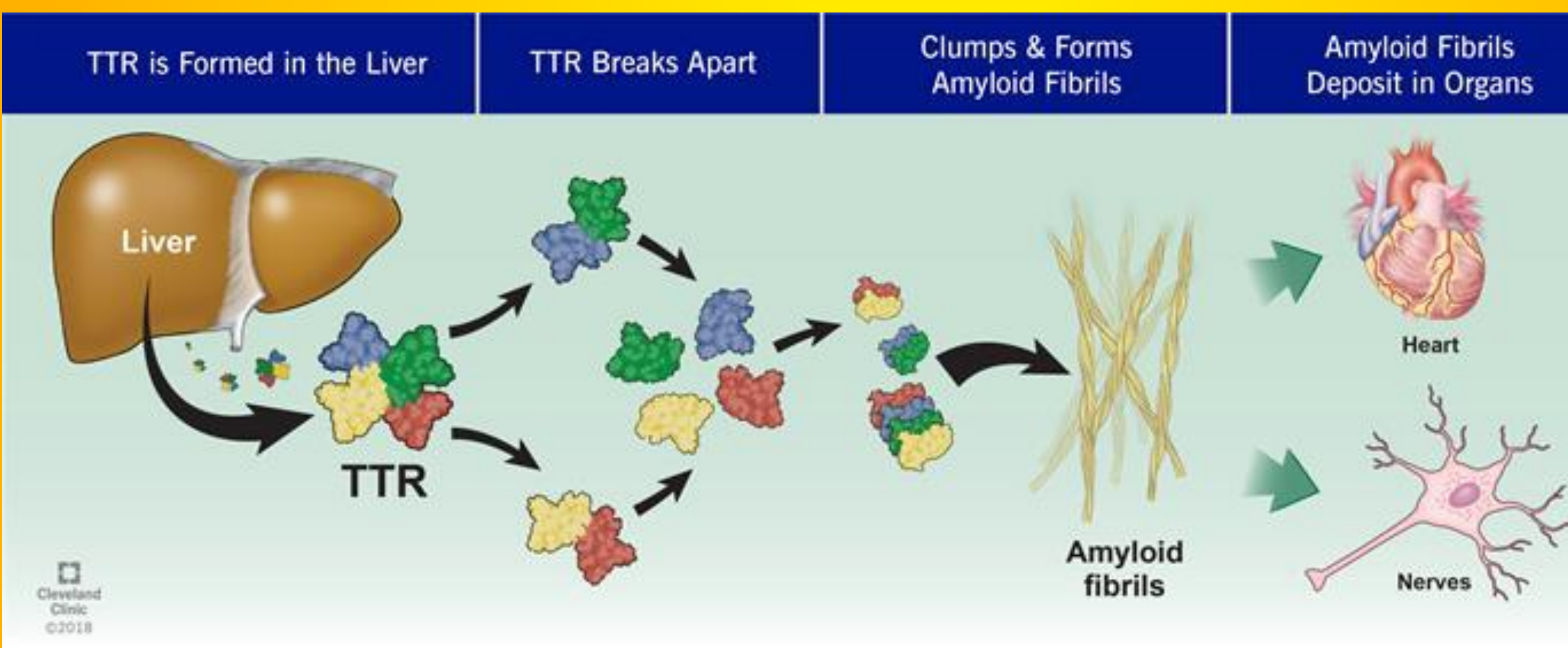
The left ventricle is mildly dilated with moderate increase in wall thickness. The left ventricle systolic function is severely reduced. The ejection fraction is <30%. There is severe diffuse left ventricular hypokinesis. There is impaired relaxation. There is moderate functional mitral regurgitation. Pulmonary artery systolic pressure is approximately 40mmHg.

Catheterization

Low right sided pressure

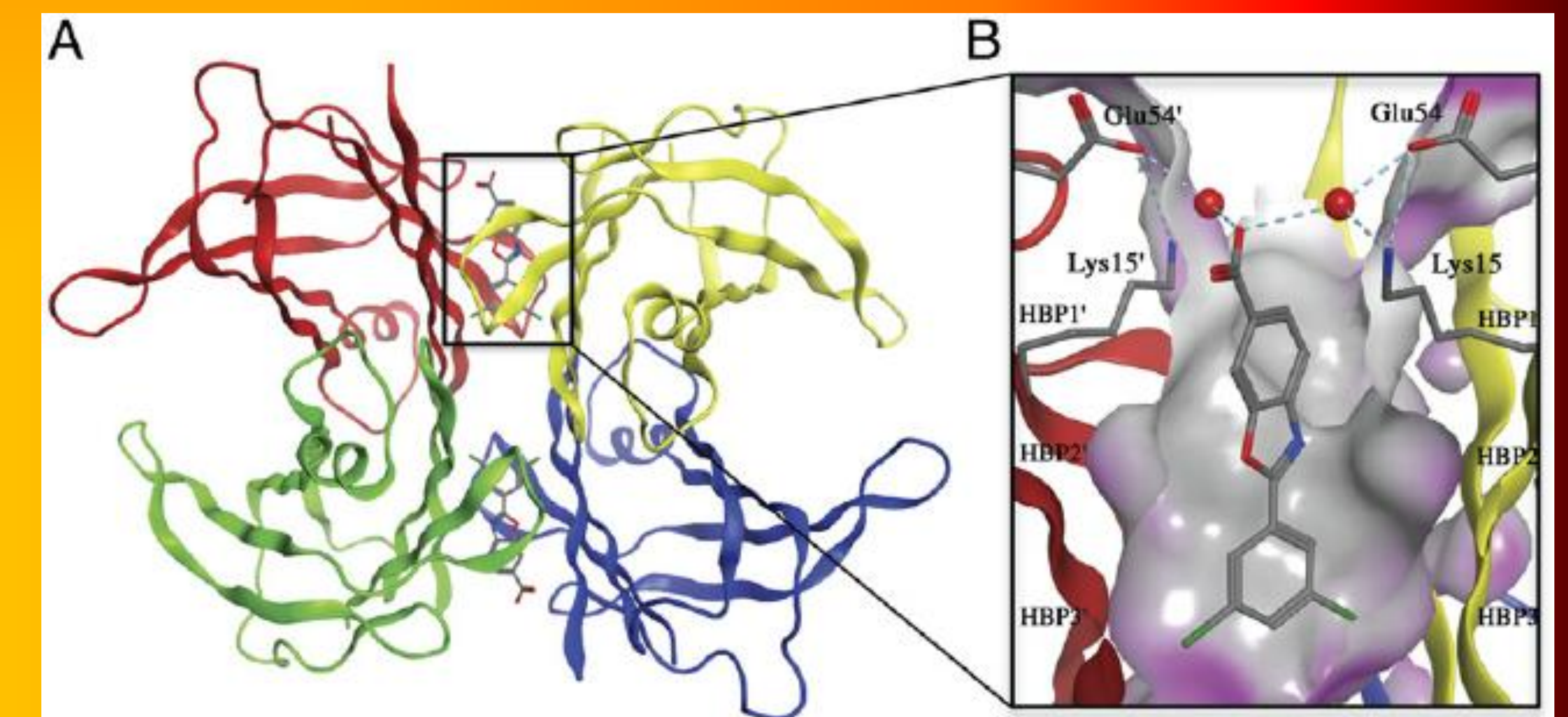
Nonsignificant coronary artery disease

Pathophysiology



Treatment

Rx: Tafamidis; prevents the misfoldings of the tetrameric amyloid precursors



Management and Follow Up

Patient underwent a repeat echocardiogram with significant findings of mildly dilated left ventricle and severely reduced ejection fraction of <30% with severe diffuse left ventricular hypokinesis and moderate mitral regurgitation. Subsequently, patient underwent a cardiac catheterization with non-significant coronary artery disease. Furthermore, he underwent a pyrophosphate scan and cardiac MRI which confirmed cardiac amyloidosis. Goal directed medical therapy was continued and optimized. He later underwent a myocardial perfusion imaging, which showed an EF of 52% with improvement in his quality of life.

References

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- <https://www.mayoclinic.org/-/media/kcms/gbs/medical-professionals/images/2019/03/25/17/03/treatment-options-attr-amyloidosis-fig2-767px.jpg>
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