

A rare case of giant coronary artery aneurysm associated with familial retinal artery macroaneurysm (FRAM).

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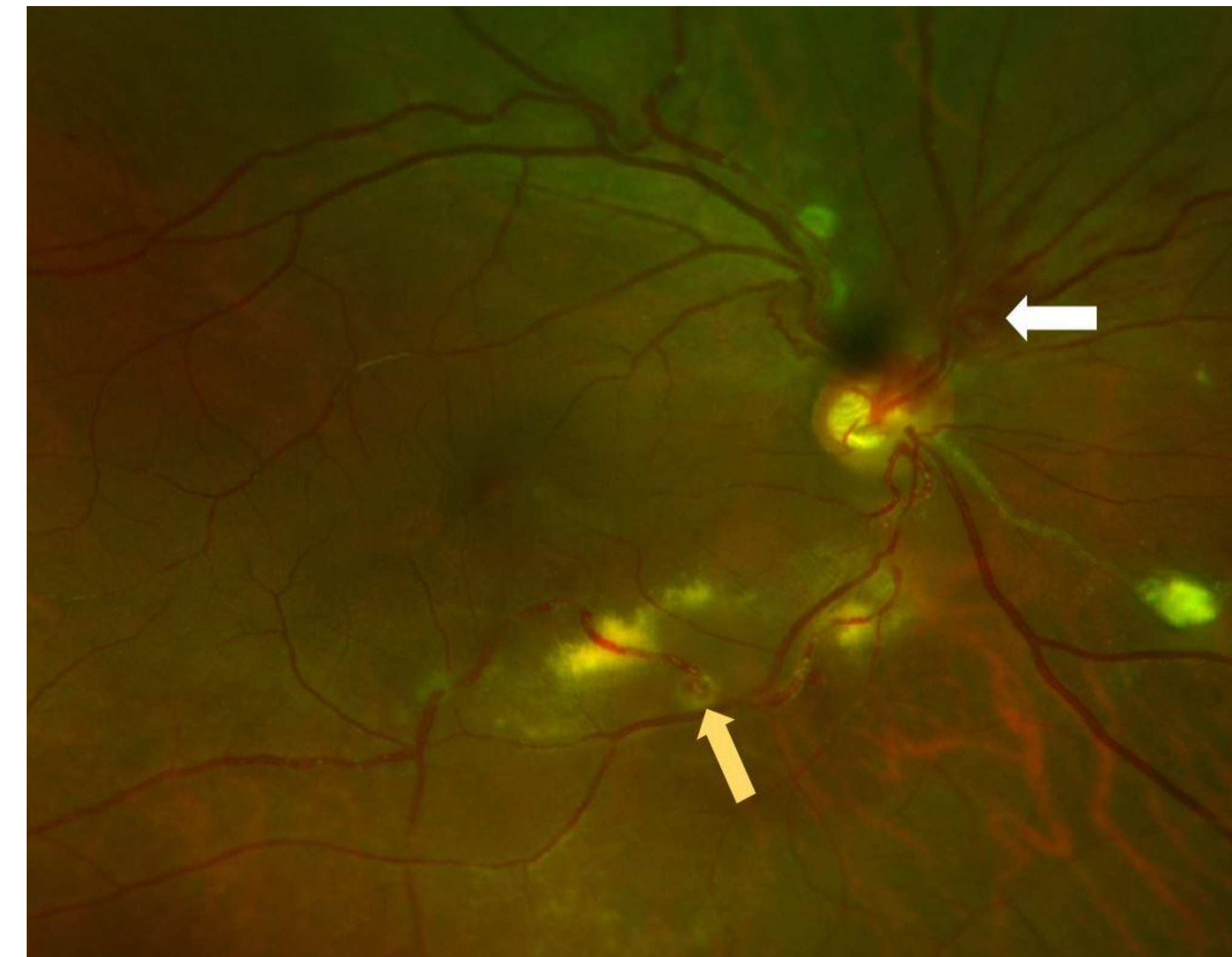
INTRODUCTION

Coronary artery aneurysm (CAA) is defined as ≥ 1.5 times dilatation of the luminal diameter of the coronary artery as compared to adjacent segments. Patients with CAA are mostly asymptomatic but it can be associated with adverse outcomes due to thrombosis or rupture. Atherosclerosis is the most common cause but coronary aneurysms can be a cardiac manifestation of the multisystemic disease. Familial retinal artery macroaneurysm (FRAM) is a rare autosomal recessive disorder characterized by retinal arterial aneurysms, which can lead to significant visual impairment due to hemorrhage and fibrosis.

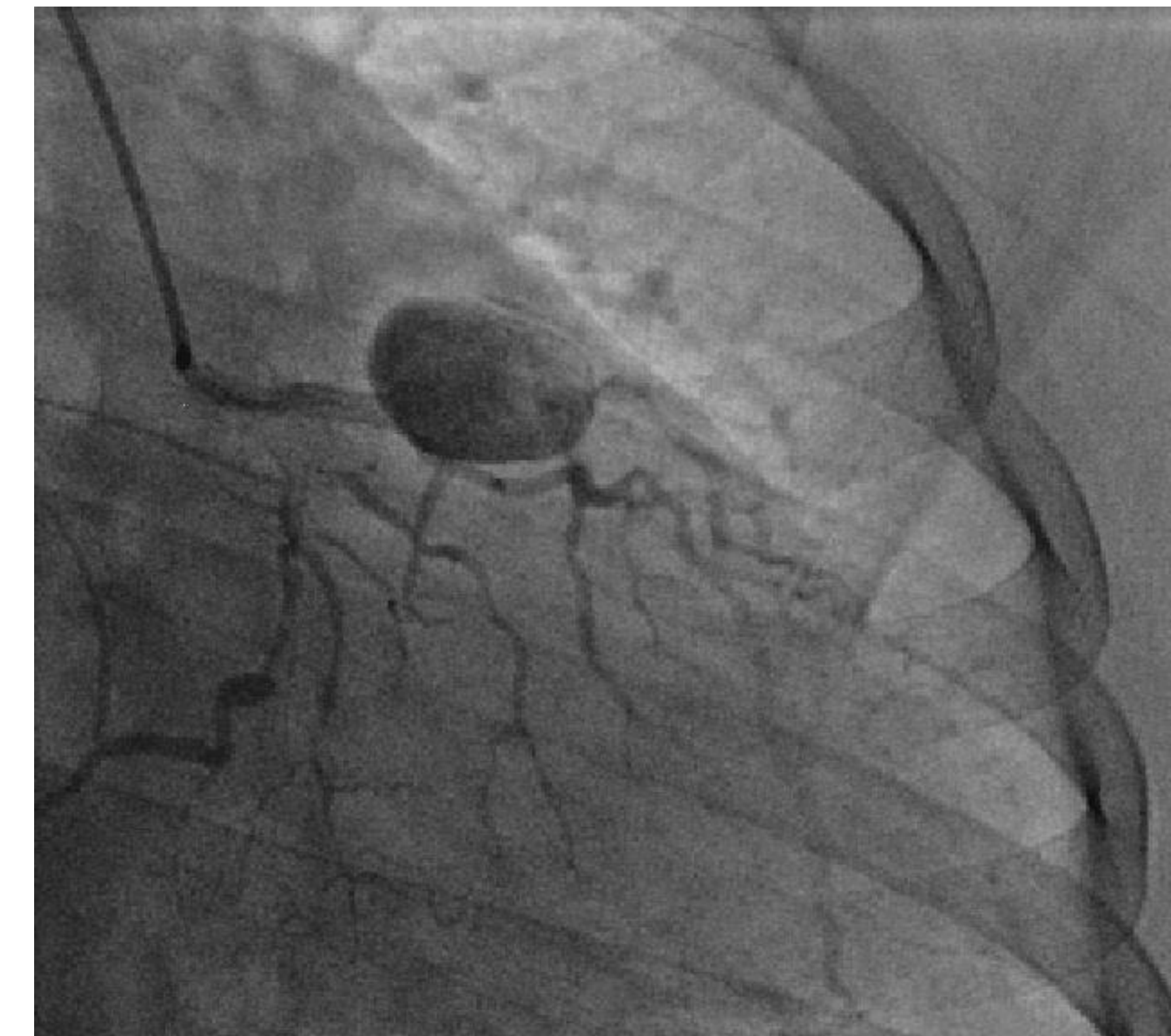
CLINICAL SUMMARY

31 years old male, smoker presented to the emergency department with episodes of atypical chest pain radiating to the left arm for five days. Review of his past medical history revealed decreased vision in the left eye, starting at the age of 10 years which progressed to blindness. He was diagnosed to have IGFBP7 mutation which causes eye manifestations in the form of familial retinal arterial macroaneurysm (FRAP). His routine blood investigations showed high troponin levels.

INVESTIGATIONS



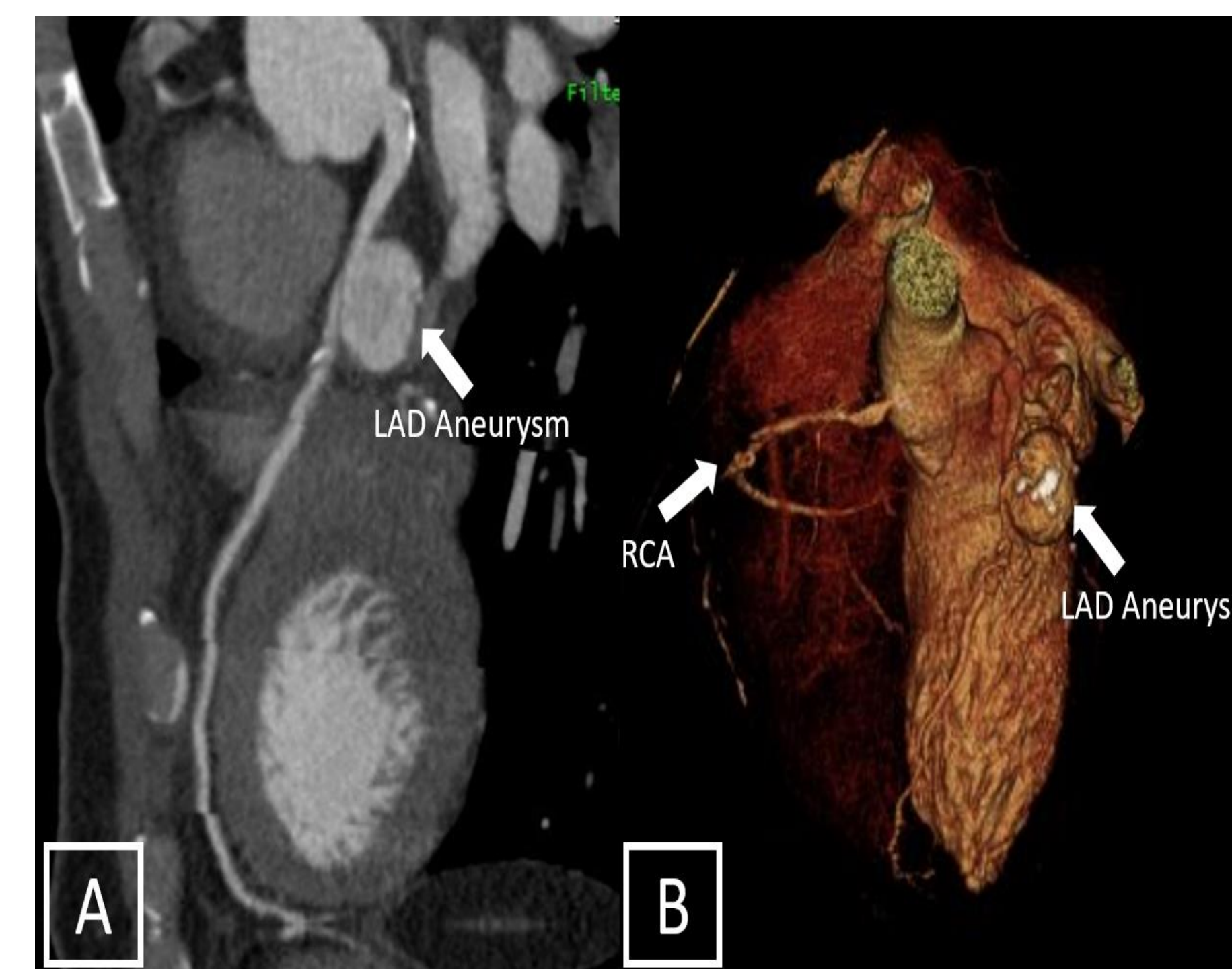
Fundoscopy of right eye showing bleeding retinal artery macroaneurysm (White arrow) and another leaking macroaneurysm (Yellow arrow).



Still image of coronary angiogram showing large aneurysm in the proximal left anterior descending artery.



Axial images of CT scan with contrast showing 22.8 mm x 16.4 mm aneurysm with mild calcification in proximal left anterior descending coronary artery.



Multiplanar reconstruction (MPR) image of cardiac CT scan with contrast showing giant coronary aneurysm in the proximal left anterior descending artery in panel A. Panel B shows 3D volume-rendered (VR) image of the same aneurysm along with right coronary artery (RCA).

Conclusion

- Coronary artery aneurysms can be a part of multisystem diseases like familial retinal macroaneurysm (FRAM).
- The management should be individualized based on symptoms at presentation, size of coronary aneurysms, and local expertise.

Discussion

- Coronary artery aneurysms are a rare (1.5-5%)
- CAA can cause angina pectoris or myocardial infarction and vessel compression.
- CAA can be occasionally congenital and mostly acquired.
- Retinal arterial macroaneurysms are mostly unilateral, acquired dilations of retinal arterioles
- Familial form of retinal arterial macroaneurysms (FRAM) is a rare autosomal recessive disease that is described by arterial aneurysm formation in the retina.
- The treatment options include medical therapy with anticoagulation, percutaneous intervention with covered stents, and surgical correction.

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