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Coronary Artery Fistula Causing Angina In A Young Man

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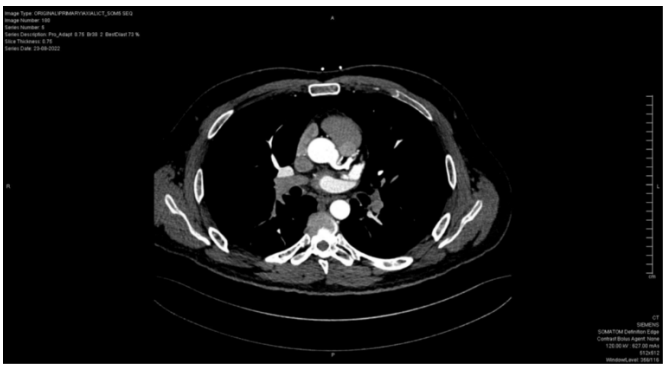
1. Clinical Image

A man in his 30s attended cardiology outpatient clinic for assessment of high blood pressure and typical exertional chest pain on running, relieved with rest for the last two weeks. On further enquiry, he described a brief episode of loss of consciousness a few days ago, symptoms of which were consistent with micturition syncope. His risk profile included smoking for more than a decade. He was normoglycemic, hypertensive and obese with a BMI of 31. His blook work up did not reveal any significant abnormality. His abdominal and urinary tract ultrasound were normal. His ECG showed sinus rhythm with no abnormality. His lipid profile was significant for a slight increase in triglyceride level of 3.5mmol/L. His transthoracic echocardiogram revealed normal biventricular dimensions and function. No valvular pathology was detected. He had a CT coronary angiogram, the image from which is given (Figure 1).



This patient has congenital coronary-pulmonary artery fistula (CPAF). Axial image from CTCA (Figure 1) shows faint filling of contrast in the main pulmonary artery confirming presence of communication between branches of the proximal left anterior descending artery and the anterior portion of the main PA.

Coronary artery fistula is an abnormal communication between a coronary artery and either a cardiac chamber or a great vessel. In the general population, the reported incidence is 0.002%.[1] Coronary artery to right ventricle fistula was previously considered the most common type but recent studies have indicated that CPAF are the most common.[2] Although usually asymptomatic, they can present as angina, myocardial infarction, heart failure, arrhythmias, and endocarditis.[3] Coronary CTA is a useful non-invasive imaging modality for the detection of CAF.[2] While there is general agreement that symptomatic patients and those with aneurysm formation should undergo corrective surgery, the treatment for asymptomatic CPAF remains less clear.[4] Transcatheter or surgical closure are the two main treatment options.[4]

Our case is a good example of a rare congenital abnormality, the diagnosis of which should be considered in all young patients presenting with angina.

References

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