Giant coronaries: coronary ectasia as an isolated cause of exertional angina and positive stress test

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DESCRIPTION

Coronary artery ectasia (CAE) is characterised by segmental or diffuse dilation of the coronary artery to more than 1.5 times its diameter.¹ CAE has been classified by Markis on the basis of the extent of ectasia.² More than half of CAE cases are related to atherosclerotic coronary artery disease. Ectasia is restricted to a single coronary in 75% cases and is usually segmental.²

We present an interesting case of a middle-aged patient with a history of exertional chest pain with a positive exercise ECG stress test. The patient was taken for a diagnostic coronary angiogram which revealed the presence of diffuse ectasia involving all three coronary arteries as well as that of the ramus (figures 1–3 and videos 1–3). The coronaries were dilated to an extent of 7–8 mm which is a very unusual sight in conventional cardiology practice. Most often dilation is segmental or involves only one of the arteries and the dilation is usually less than what was seen in this case. There was no evidence of any atherosclerosis to account for the anginal symptoms. The patient was decided to be put on conservative medical management including statins and antiplatelets. The symptoms improved to a significant extent with this therapy.

The occurrence of angina due to ectasia has been discussed but its effect on electrocardiogram has not. Coronary ectasia can be a cause of acute thrombus formation which can cause infarction and clogging of microcirculation and slow antegrade flow. This can lead to decreased microcirculation flow gradient which can cause exertional

Figure 2 Coronary angiogram in anteroposterior cranial view showing giant left anterior descending, diagonal and left circumflex arteries.

symptoms.^{1–3} These symptoms may not be responsive to conventional antianginal and antiplatelet therapy which has been proved to be effective in case of atherosclerotic coronary artery disease. Diffuse coronary ectasia does not require treatment unless associated with obstructive atherosclerotic lesion or aneurysmal segments which can be

Figure 1 Coronary angiogram in right anterior oblique caudal view showing grossly dilated left circumflex and anterior descending coronary arteries.

Figure 3 Left anterior oblique view showing grossly ectatic right coronary artery.

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Video 1 Coronary angiogram in right anterior oblique caudal view showing grossly dilated left circumflex and anterior descending coronary arteries.

Video 3 Left anterior oblique view showing grossly ectatic right coronary artery.

Video 2 Coronary angiogram in anteroposterior cranial view showing giant left anterior descending, diagonal and left circumflex arteries.

surgically corrected or dealt with covered stents. Chronic anticoagulation has been recommended in cases of diffuse ectasia and aneurysms by some studies but does not form a part of the guidelines.

Contributors All the authors have contributed in drafting and finalising the manuscript.

Learning points

- ▶ Coronary artery ectasia rarely involves all the coronaries and the dilation of all the coronaries to aneurysmal proportions involving the entire length is even rarer as was seen in this case.
- ▶ Coronary artery ectasia can be a cause of microcirculatory dysfunction and microcirculation clogging by in situ thrombosis which may be the cause of anginal symptoms in these cases, although the occurrence of a positive ECG in these cases has seldom been discussed.⁴
- ▶ Percutaneous interventions in cases of haemodynamically significant atherosclerosis can be challenging in cases with giant coronaries due to difficulty in obtaining hardware and stents to suit the intervention.

Competing interests None.

Patient consent Obtained.

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