Solitary Focal Coronary Artery Aneurysm in A Middle Aged Male with Atypical Chest Pain

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Editor - We read with great interest the article "Solitary focal coronary artery aneurysm in a middle aged male with atypical chest pain" by Yeo and Khalid[1]. We would like to present the case of a patient with right and left coronary artery aneurysms who underwent coronary artery bypass grafting (CABG). This is the first such case that we encountered at our institution, after having performed 460 CABG operations since November 1996.

A 51 year old Chinese man sustained an inferior myocardial infarction 6 months prior to presenting to our centre with worsening angina pectoris. Coronary angiography revealed severe triple vessel coronary artery disease. There is significant proximal stenosis with aneurysmal dilatation (3cm x 1.5cm) just distal to the stenosis in the left anterior descending (LAD) artery (Fig. 1). There was also a significant stenosis in the proximal obtuse marginal branch of the circumflex artery (Fig. 1). Angiographically, the right main coronary artery was diffusely ectatic with a significant stenosis just before the distal bifurcation. There were also significant proximal stenoses of both the posterior descending and left ventricular branches of the right coronary artery (Fig. 2). He was therefore commenced on oral anticoagulation, in addition to his anti-anginal medication, because of the possibility of thromboembolism, precipitating worsening of his anginal symptoms. He subsequently underwent CABG. At operation, there was a localised aneurysmal plaque at the proximal LAD, which corresponded to the area seen on angiography. The whole of the main right coronary artery was diffusely atheromatous and aneurysmal, measuring about 2.5 cm in diameter (Fig. 3). Both the proximal posterior descending artery (1.25 mm good quality vessel) and obtuse marginal artery (1.75 mm good quality vessel) were therefore grafted with a reverse saphenous vein graft. The pedicled left internal mammary artery was anastomosed to the mid-LAD (2.0 mm good quality vessel). *Care had to be taken at the time of surgery to prevent excessive manipulation of the heart and native coronary arteries as this may dislodge atherosclerotic debris, which may embolise and cause peri-operative myocardial infarction.* The patient had an uneventful recovery and is angina free 9 months following surgery.

For patients with coronary artery aneurysm requiring revascularisation, the percutaneous approach might be appropriate in selected cases. There have been a few reports recently on similar cases where the coronary stenoses were dilated with balloon angioplasty and "cover stents" were deployed at the neck of the aneurysm to seal off the aneurysm[2,3]. The short and medium term patency results are encouraging using this technique.

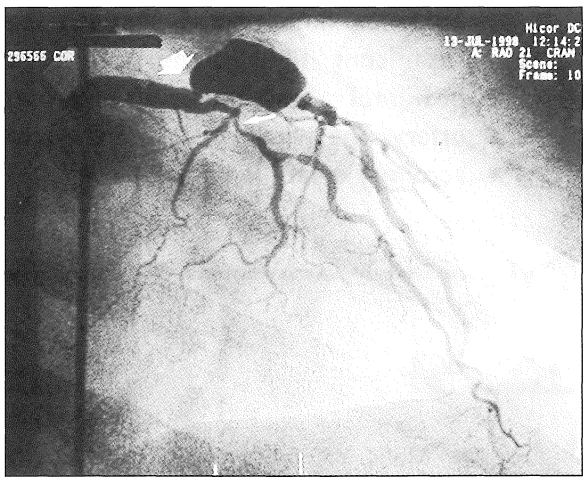

Fig. 1: Large arrow showing the significant tight stenosis of the proximal LAD with an aneurysm dilatation distal to it. Small arrow showing the proximal stenosis in the obtuse marginal branch of the circumflex artery.

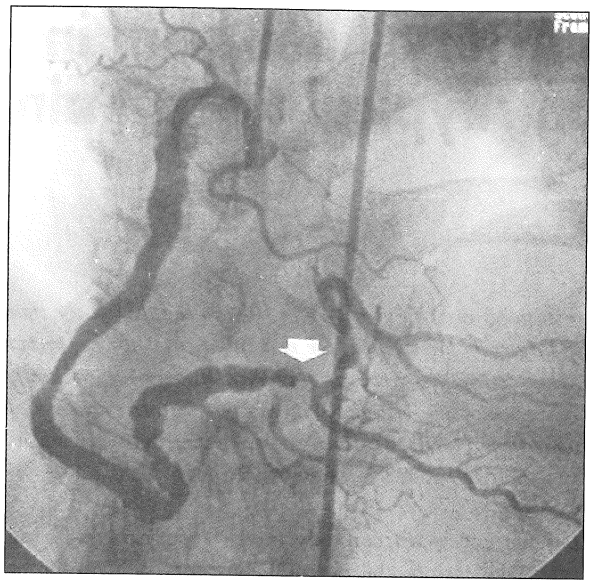

Fig. 2: Large arrow showing the distal stenosis in the main right coronary artery before bifurcating to its 2 terminal branches, the posterior descending and left ventricular branches. Small arrow showing the significant tight stenosis of the proximal posterior descending artery. The whole of the main right coronary artery is diffusely ectatic.

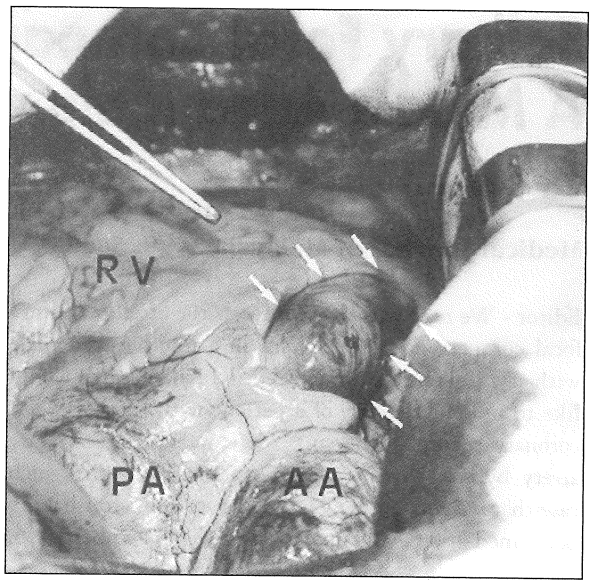

Fig. 3: View of the heart from the cranial end of the patient. Ascending aorta (AA); right ventricle (RV); and the surgical forceps pointing and small arrows delineating the aneurysmal right main coronary artery (RMCA).

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