Coronary arteriovenous malformation presenting with acute myocardial infarction

A patient presented to the Emergency Department with sudden-onset chest tightness associated with diaphoresis and dyspnoea. Electrocardiogram revealed ST depression over the lateral leads and cardiac enzymes were elevated, consistent with Non-ST Elevation Myocardial Infarction.

Invasive coronary angiography showed a large left main coronary artery (LM) that was aneurysmal, with thrombus near the ostium of left circumflex artery (LCx) (figure 1, see online supplementary video A). CT angiography confirmed an arteriovenous malformation (figure 2) arising from an aneurysmal LM coronary artery (see online supplementary figure S1) and draining into the right atrium (see online supplementary figure S2), with a thrombus at the proximal portion causing mild narrowing of the origin of the LCx (see online supplementary figure S3); the right coronary artery and left anterior descending artery were normal.

The patient was managed expectantly, as he was deemed unsuitable for transcatheter or surgical correction of the

Figure 1 Invasive coronary angiogram showing aneurysmal left main coronary artery, with thrombus near the ostium of left circumflex artery. AVM, arteriovenous malformation; LCx, left circumflex; LM, left main; T, thrombus. Arrow denotes narrowing of the proximal left circumflex due to thrombus formation.

Figure 2 CT coronary angiogram illustrating the course of the arteriovenous malformation from the left main artery and draining into the right atrium. *=course of the coronary arteriovenous malformation.

coronary arteriovenous malformation in view of the tortuous anatomy and the presence of a large thrombus. He was commenced on warfarin anticoagulation, and had remained asymptomatic while being followed-up for the past 3 years.

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