

Giant coronary artery aneurysm in an adult

A 56-year-old man presented with effort angina of 2 months' duration. Coronary angiogram revealed a tight tubular stenosis in proximal left anterior descending artery (LAD), followed by a giant, wide-mouthed, saccular aneurysm measuring 16×14 mm (figure 1). As the cardiac surgeons speculated difficulty in

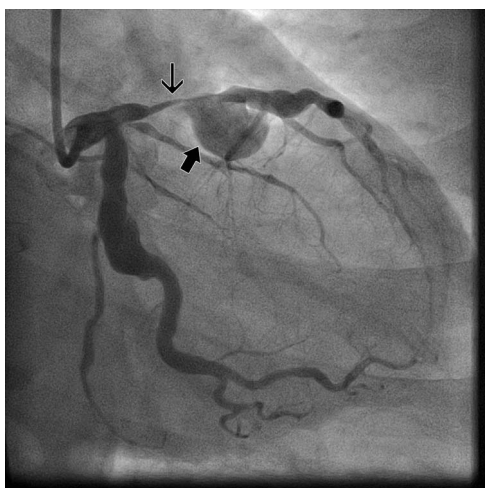
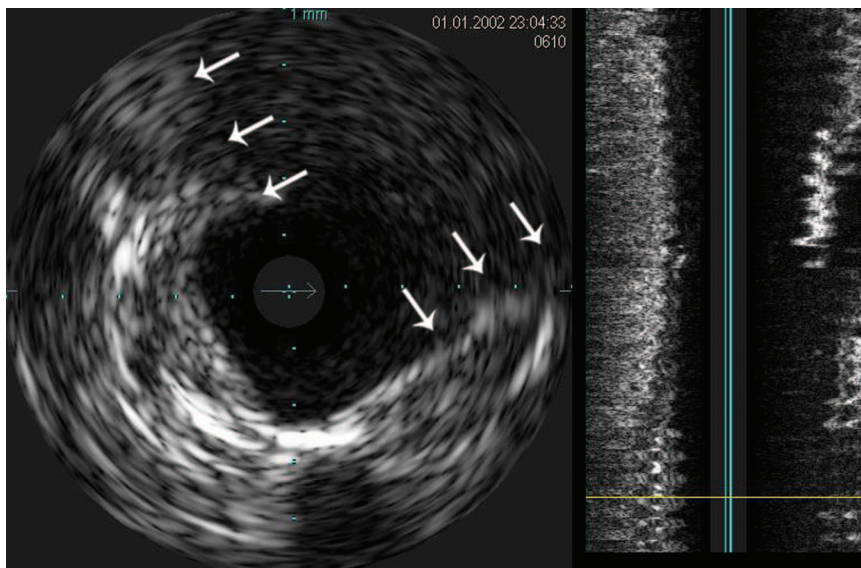


Figure 1 Right anterior oblique caudal view of the left anterior descending artery at baseline, showing proximal tubular stenosis (arrow) followed by a giant aneurysm (bold arrow).

Figure 2 Intravascular ultrasound image of the aneurysm in the left anterior descending artery, the borders of which are marked with white arrows.



accessing the site, a percutaneous coronary intervention was planned. The left main coronary artery was engaged using an 8F Judkins left 3.5 guiding catheter. After predilatation with a 2.5×10 mm balloon (Sprinter) and an intravascular ultrasound (IVUS) study (figures 2 and 3), a 4×16 mm polytetrafluoroethylene (PTFE)-covered stent (Graft Master, Jostent) was deployed at 16 bars for 22 s. Since the subsequent angiogram revealed a residual leak into the distal portion of the aneurysm (figure 4), another 3.5×15 mm PTFE-covered stent (Prograft) was deployed distally in an overlapping fashion at 16 bars for 20 s. Postdilatation was done using a 4×9 mm non-compliant balloon (NC Sprinter). The final angiogram revealed no residual stenosis and a successful exclusion of the aneurysm from the native coronary artery (figures 5 and 6).

Coronary aneurysm is defined as localised dilatation of artery to more than 1.5 times the adjacent normal segment. A coronary artery aneurysm is termed 'giant' when its diameter exceeds 8 mm or is more than four times the size of the reference vessel.¹ They are uncommon in adults, the major causes being atherosclerosis, Kawasaki disease, trauma, inflammatory disorders (eg, polyarteritis nodosa), connective tissue disorders (eg, Marfan syndrome) and iatrogenic causes. Surgery had been the classically described management, but aneurysmal exclusion using covered stent is a novel and effective alternative therapy.²

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Contributors The patient was admitted and treated by ASM. The article was prepared by GBS and JSR.

Competing interests None.

Figure 3 Intravascular ultrasound-chroma flow image showing the aneurysm in the left anterior descending artery, the borders of which have been marked with white arrows.

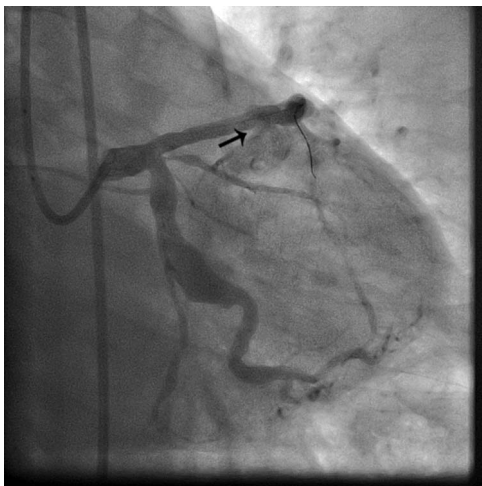
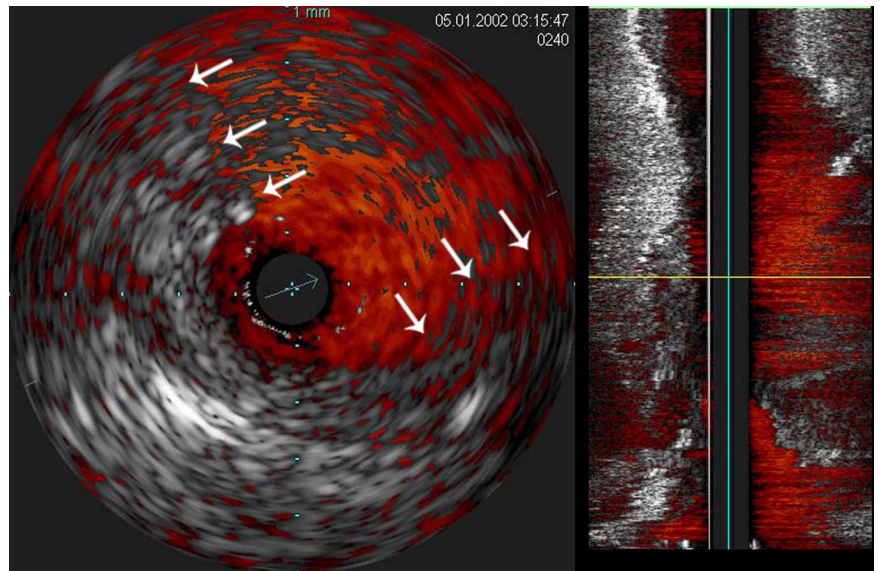


Figure 4 Check coronary angiogram (right anterior oblique; caudal view) after placement of the first covered stent showing residual leak (black arrow) into the aneurysm distal to the stent.

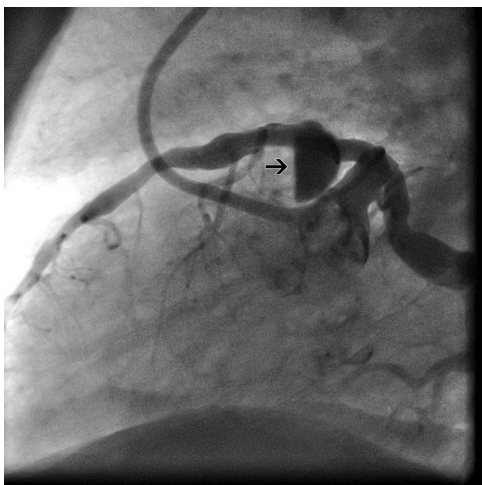


Figure 5 Angiogram after polytetrafluoroethylene-covered stents placement showing a peculiar 'blood-dye' level (black arrow) as the trapped dye settles within the aneurysm confirming its complete exclusion from the native coronary artery lumen.

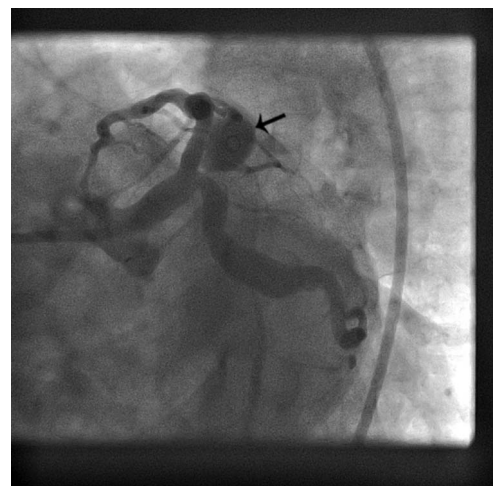


Figure 6 Coronary angiogram (left anterior oblique; caudal view) confirming successful exclusion of the aneurysm that still contains dye (black arrow) from the left anterior descending artery after placement of covered stents.

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