

A Giant Coronary Aneurysm

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A 70-year-old obese retired patient with an extensive list of underlying medical conditions, including ischemic heart disease with coronary artery bypass grafting in 1999, hypertension, chronic renal failure, and atrial fibrillation was admitted to hospital in August 2008. He was diagnosed with subcutaneous abscess in the infraclavicular region of the right shoulder plus the left hallux metatarsophalangeal gout with secondary infection. He had a raised C-reactive protein (CRP) at 450 and was septic with positive blood culture for *Staphylococcus aureus* on admission. He underwent arthroscopic washout of the shoulder plus drainage of the foot abscess. He was commenced on antibiotics with a good initial response. However, he started spiking temperature with a raised CRP again. As transthoracic echocardiography (TTE) could not rule out infective endocarditis, he underwent transesophageal echocardiography (TEE), which showed a few indistinct echoes on the left ventricular side of the posterior mitral valve leaflet. Hence, he was treated for infective endocarditis with Teicoplanin and Clindamycin. He was discharged after the completion of his antibiotic treatment.

He was readmitted to hospital on 29th October, 2008 with features of heart failure and pulmonary edema. He did not have any significant troponin rise. He was found to be anemic with hemoglobin at 8.8 and an increasingly high creatinine of 183. ECG upon admission revealed atrial fibrillation. He was treated for congestive cardiac failure with diuretics. His echocardiogram showed an ejection fraction of 60% with moderate mitral regurgitation.

He underwent coronary angiography on 24/11/08, which showed vestigial native system with proximally occluded circumflex (Cx), left anterior descending (LAD), and right coronary (RCA) arteries. He had patent native left main stem (LMS), saphenous vein graft (SVG) to diagonal vessel with good runoff with only mild stenosis at the graft ostium, patent left internal mammary artery (LIMA) to LAD with

good runoff and patent SVG to posterior descending artery (PDA) with reasonable runoff. The interesting finding was giant aneurysms at the ostium of the Cx vessel (Figure 1), in the subclavian artery at the ostium of the LIMA graft (Figure 2) and the midbody of SVG to PDA (Figure 3).

Giant native coronary artery or bypass graft aneurysms are uncommon findings, and there are rare reports in the literature regarding association with endocarditis. Other associated etiologies of native coronary giant aneurysms include dissection, inflammation, vasculitis, and congenital abnormalities.

In this report, an infective cause for the aneurysms was strongly suspected given the recent endocarditis. This diagnosis was reinforced by the fact that the patient had previously undergone a graft study in 2006 showing absence of any aneurysms at the time.

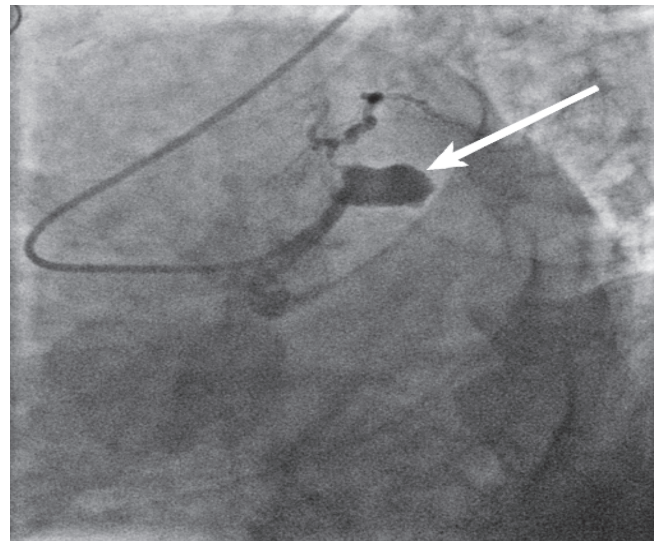


Figure 1. Aneurysm at the ostium of native circumflex artery (arrow)

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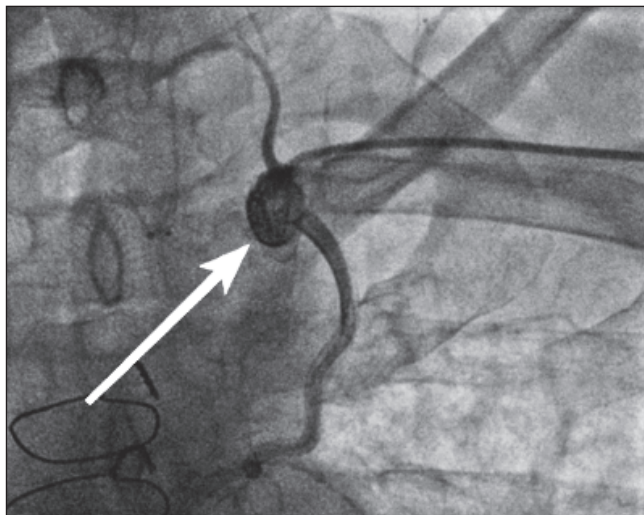
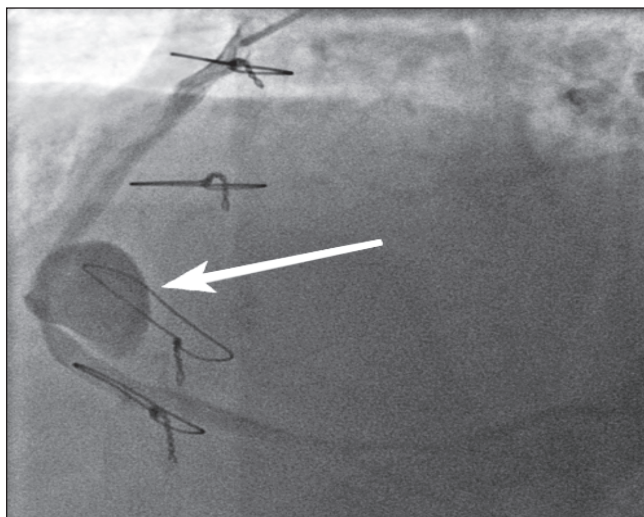
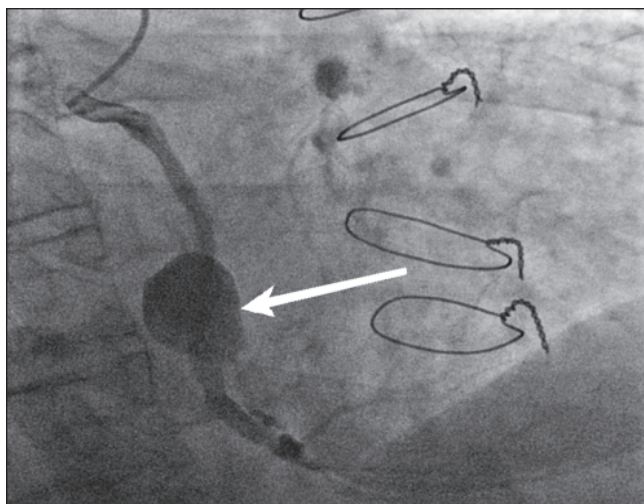


Figure 2. Aneurysm at the ostium of left internal mammary artery

Although this patient was treated with antibiotics with resolution of his inflammatory markers, the presence of the giant aneurysms posed a significant risk for thrombosis, embolization, and rupture along with the serious consequences of these events. The further management of such aneurysms is open to debate and may include medical, percutaneous intervention or surgery. In this case, the patient was referred for treatment with percutaneous coronary intervention to the grafts and Cx aneurysms with covering stents.



A



B

Figures 3. Aneurysm at mid saphenous vein graft to posterior descending artery (arrows) in two views (A&B)