

Physician - Coronary Artery Diseases and Surgery

[MEP-19]

Surgery for A Giant Atherosclerotic Left Main Trifurcation Saccular Coronary Artery Aneurysm

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A dilated coronary artery segment larger than 1.5 times the diameter of the reference vessel defines coronary artery aneurysm. Herein, we reported a case of left main trifurcation aneurysm, a challenging anatomy. A 57-year-old female was referred to our department with an exertional angina. The patient had no significant medical history, except for hyperlipidemia and previous history of smoking. All diagnostic tests were standard. However, an electrocardiogram showed anterior T-wave inversion. Computed tomography angiography revealed a saccular left main coronary artery (LMCA) aneurysm at the trifurcation level. Coronary angiography demonstrated a giant saccular aneurysm at the trifurcation of LMCA, measuring 32×21 mm with tight postaneurysmal stenosis in the intermediate artery. The patient underwent surgery under general anesthesia. A median sternotomy was performed. After cannulation and aortic cross-clamping, an LMCA trifurcation giant aneurysm was exposed on the posterolateral aspect of the heart by the help of stay thick nylon tapes, which were passed through oblique and transverse sinuses. The giant saccular aneurysm was carefully dissected. The branches of trifurcation were visualized, and the aneurysm sac was resected. A meticulous endarterectomy was performed at the trifurcation level and reconstructed with saphenous vein roof plasty. Then, the intermediate artery was revascularized with a saphenous graft from ascending aorta. The aortic cross-clamp time was 52 min, and the cardiopulmonary bypass time was 75 min. The patient had an uneventful hospitalization and was discharged on aspirin and warfarin therapy. This case demonstrates that the surgical reconstruction of giant saccular LMCA aneurysms using a saphenous graft patch is safe and allows for percutaneous interventions when necessary.

Keywords: Angiography, coronary artery aneurysm myxoid degeneration, coronary artery aneurysm, coronary disease.

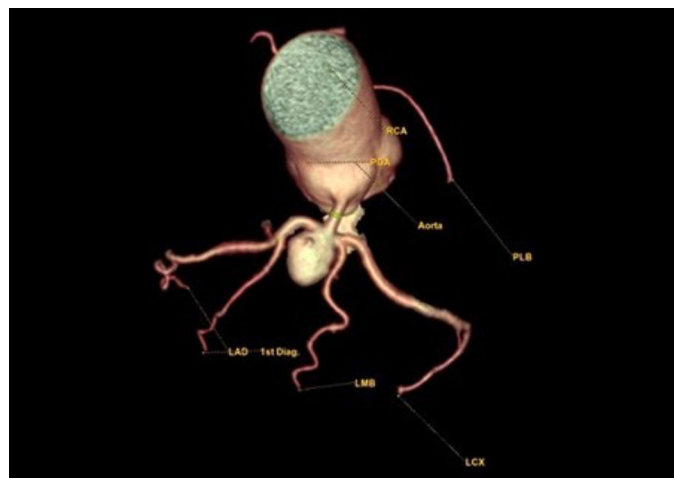


Figure 1. Illustration with three-dimensional reconstructed coronary computed tomography angiography images of the coronary artery aneurysm.

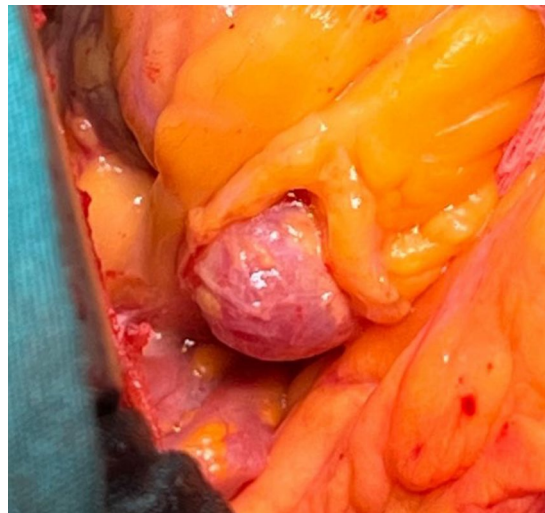


Figure 2. A giant sacular aneurysm at the trifurcation of the left main coronary artery measuring 32x21 mm. Posterior aspect of the pulmonary artery (not transected).

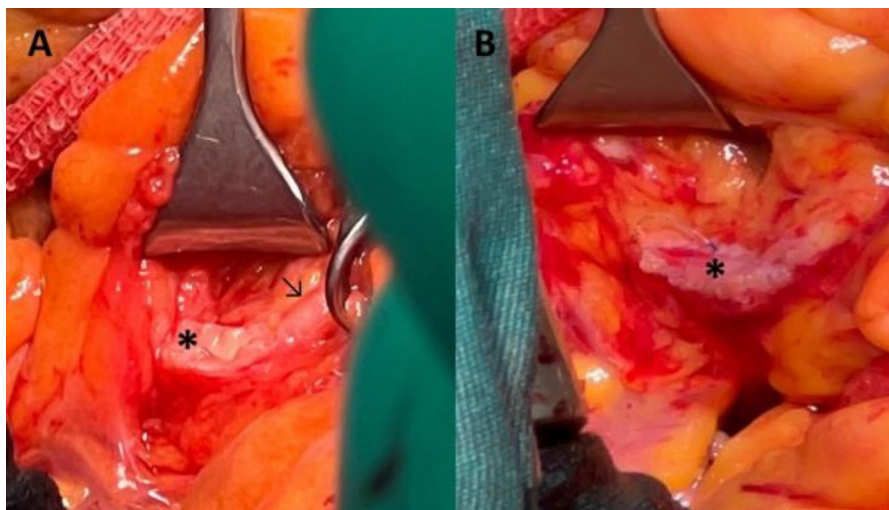


Figure 3. (A) The aneurysm sac was carefully resected. The left main coronary artery, proximally (arrow) and the trifurcation level (asterix). (B) Reconstruction with saphenous vein roofplasty with a continuous 7-0 polypropylene suture ensured the preservation of the native coronary vasculature (asterix).

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