

Myocardial bridge of the left anterior descending artery

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A 41-year-old female with a history of diabetes mellitus and hypertension was evaluated for exertional angina. During an exercise stress test, she developed hypotension and ST-segment depression. Coronary angiography revealed compression of the mid-portion of the left anterior descending (LAD) artery during systole (Fig. 1A) that did not persist during diastole (Fig. 1B). Computed tomography coronary angiography (CTCA) showed a myocardial bridge of the LAD (Fig. 2A). Medical therapy for 1 year, which included a beta blocker, calcium channel blocker, and aspirin, was unsuccessful, and her angina persisted. At the time of surgery, under cardiopulmonary bypass and cardioplegic arrest, the proximal LAD appeared normal, and so an isolated myotomy of the mid-portion of the LAD was performed. This portion of the LAD was also normal in size and had no atherosclerotic lesions (Fig. 2B). The patient tolerated the

procedure well and has remained angina free. A CTCA performed 6 months after surgery showed no myocardial bridge and no atherosclerotic lesions (Fig. 2C).

CONFLICT OF INTEREST

The authors acknowledge no conflict of interest in the submission.

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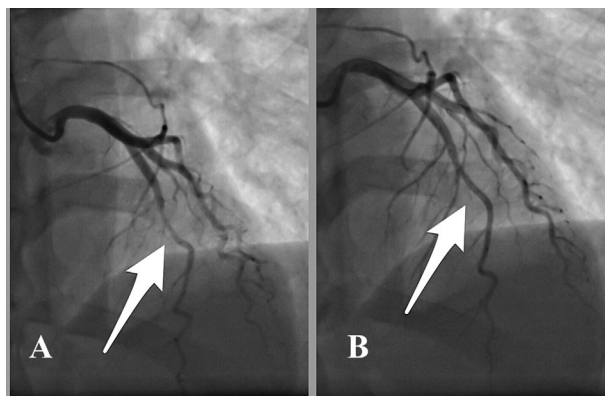


FIGURE 1 Coronary angiography demonstrated compression of the mid-portion of the left anterior descending coronary artery during systole (A) that did not persist during diastole (B)

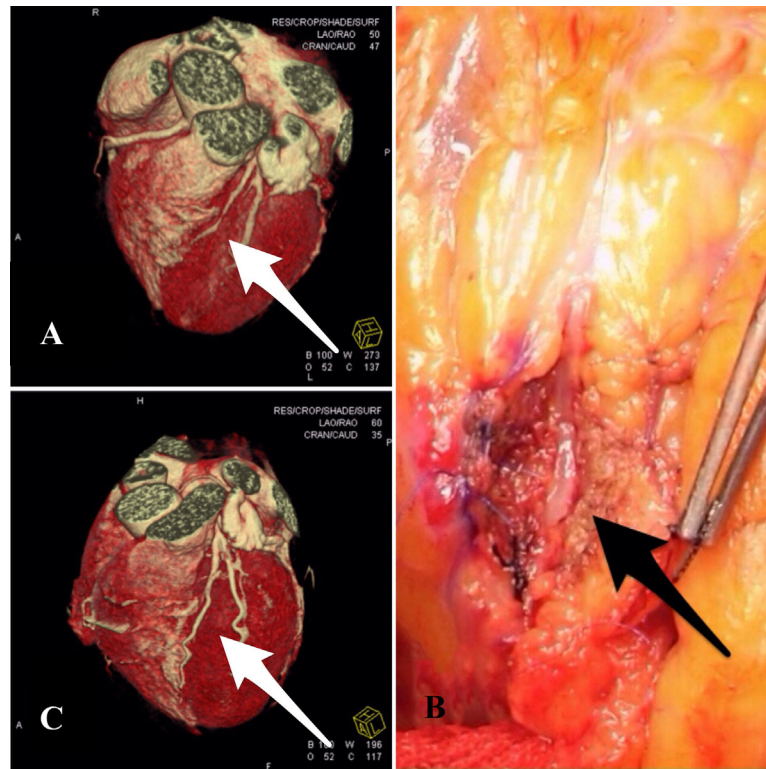


FIGURE 2 Reconstructed 3-dimensional image of computed tomography coronary angiography (CTCA) shows left anterior descending (LAD) coronary artery during systole preoperatively (A); LAD at the myocardial bridging level was dissected (B); image of CTCA during systole postoperatively (C)