PCI after Early and late IMA Failure

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Statement

- CABG remains the default technique for revascularization for left main coronary artery disease and 3 vessel disease involving the proximal LAD, specially in diabetic patients, where ITA is the favorite graft.
- This presentation is about patients who require PCI following CABG, which may be anywhere between a few hours to several years post CABG.
- I have chosen 2 illustrative cases to show how PCI may be performed after CABG with LIMA failure due to erroneous surgical technique.
Case 1

- 47 year old diabetic male severe angina
- Severe 3 vessel disease, including proximal LAD.
- Good LV
- Referred to the gold standard procedure CABG using all arterial revascularization LIMA and RIMA.
- Very early (weeks) post CABG crippling angina, LV function as pre CABG.
- Angio shows occlusion of RIMA and LIMA and native LAD.
Case 1 Conclusion

- Successful PCI with reconstruction of the LAD relying on the pre CABG angio, using 3 DES for the LAD and one large BMS for the RCA.
- Patient asymptomatic 8 years post PCI, exercising daily, only upset that we sent him to CABG in the first place.
- On Aspirin, Plavix and Statins (3 pills after dinner).
CASE 2

- 49 year old male, gets sent to CABG in April 2017, receives LIMA to LAD and SVG’s.
- Same night gets severe chest pain and an anterior STEMI.
- Surgeon misdiagnosis the condition as acute pericarditis and does not refer to Cardiology.
- Patient continues to have effort angina for 9 months post CABG, on maximal medications.
- Echo shows preserved LV function with anterior hypokinesia, moderate MR and SPECT shows viable ischemic myocardium in LAD territory.
2017 Pre CABG
2017 pre CABG
Same night post CABG, severe chest pain
Occluded LAD & RCA, occluded LIMA and SVG to RCA, patent grafts to diagonal and OM,
Good LV function
Moderate MR
PAP 56mmHg
Patient sent to TEE and CMR for MR assessment.
Heart team recommends PCI to LAD based on all data, no MV repair
Final Result and conclusion

- Decision was taken to perform CTO via the LIMA to LAD after much debate with the native LAD recanalization approach as a second choice if failure.
- Successful PCI to LIMA to LAD with one DES.
- One month follow up, resolution of angina, walks daily.
Conclusion

- Early ITA graft failure post CABG due to technical factors is not very rare.
- ITA graft failure totally beats the point of having sent the patient to CABG with huge medical and medicolegal and financial implications, it’s a zero option PCI where failure is not an accepted option, its more difficult than if it had been attempted without referral to CABG.
- The anatomy of the LM and LAD before CABG and the ITA disease type post CABG helps determine the PCI approach.
- CTO vs non CTO pre CABG, Distal ITA anastomosis vs absent ITA damaged by the surgery...etc
- The pre angiographic CABG info is vital for decision making.
- We call those procedures PCI backup for CABG, the circle has turned 380
Thank You