**18.1 PCI in the prior CABG patient**

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| **Step** | **Challenge** | **Prevention** | **Treatment** |
| 1. Planning | Unknown CABG anatomy |  | * Obtain CABG report * Review prior angiograms * Explain all myocardial territories |
| 1. Monitoring |  |  |  |
| 1. Pharmacology | No reflow in SVG PCI |  | * Vasodilators * GP IIb/IIIa inhibitors avoided in SVG PCI |
|  | High-risk for recurrent events |  | * Prolonged DAPT |
| 1. Access | Difficult to engage grafts |  | * Femoral access preferred |
| 1. Engagement | Unable to find grafts | * Review surgical report * Review prior angiograms * Understanding of usual graft takeoff location | * Different catheters * Graft markers * Aortography |
|  | Difficult to engage grafts | * Femoral access * Review prior angiograms * Understanding of usual graft takeoff location | * Femoral access * Review prior angiograms * Understanding of usual graft takeoff location * MPA1, RCB for SVG-RCA * JR4, LCB, AL for SVG-left * IM, JIM, VB1 for IM |
| 1. Angiography | Visualize lesion without causing ischemia or dissection | * Do not inject during pressure dampening * Nitroglycerin * Minimize injections * Ensure contrast clears * Optimal angle for locating ostium | * Ischemia: disengage catheter * Dissection: stent |
| 1. Determine target lesion | High risk for acute and chronic complications with SVG PCI | * Treat native coronary lesions if feasible | * Treat native coronary lesions if feasible |
| 1. Wiring | High-risk of distal embolization | * Use Embolic Protection Devices if feasible |  |
|  | Tortuosity at SVG anastomosis |  | * Various guidewires * Angulated microcatheters * Balloon deflection technique |
|  | IM pseudolesions | * Avoid wiring highly tortuous IM grafts * Use soft guidewires | * Treat native coronary artery instead of IM |
| 1. Lesion preparation | Lesion under-expansion |  | Balloon undilatable algorithm – chapter 23.2 |
|  | Unable to reach lesion | * Short guide catheters * Deep guide catheter intubation into the target vessel. * Use of long (300 cm) guidewires * Long-shaft balloon and stents | * Short guide catheters * Deep guide catheter intubation into the target vessel. * Use of long (300 cm) guidewires * Long-shaft balloon and stents |
|  | Acute SVG occlusion | 1. Short guide catheters 2. Deep guide catheter intubation into the target vessel. 3. Use of long (300 cm) guidewires 4. Long-shaft balloon and stents | * Thrombectomy * EPD * Vasodilators * Laser * Treat native coronary artery instead |
| 1. Stenting | SVG distal embolization | * Treat native coronary arteries instead of SVGs * Use EPDs if treating SVG lesions | * Vasodilators |
|  | High-risk of SVG restenosis | * Treat native coronary arteries instead of SVGs | * Treat native coronary artery * Ensure good stent expansion |
|  | Vessel size mismatch | * Size stent based on smaller vessel | * Dissection: stent * Perforation: covered stent |
| 1. Closure |  |  |  |
| 1. Physiology | High rates of progression in SVGs | * Negative functional assessment may not necessarily provide good prognosis |  |
| 1. Imaging | Suboptimal stent sizing | * Select stent size based on intravascular imaging |  |
| 1. Hemodynamic support |  |  |  |