**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
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|  | 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
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