Aorto-Ostial Interventions

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Partial Pre-Inflation Technique:
After approximate positioning, inflate the stent balloon at 2 atm. This increases the stent profile & reduces oscillation while allowing position adjustment before full deployment.

Floating Guide Wire Technique: Place a steerable, soft-tipped wire placed in the aorta just below the ostium. This second wire stabilizes the guide outside the artery & prevents it from moving deep into the artery. It also defines the junction of the artery & aorta, landmark.

Stent Draw-Back Technique: Place a second wire in the non-target vessel beyond the bifurcation with the ostial stenosis.

A) The stent is first advanced on the target vessel wire beyond the lesion

B) A compliant balloon (slightly undersized to the main parent vessel) is advanced over the second wire opposite the ostium of the target vessel.

C) The balloon is then inflated at low pressure (6-8 atm)

D) The undeployed stent catheter is pulled back against the inflated balloon until a dent is seen followed by stent deployment. Both balloons are then deflated.

Figure 5: Illustration of stent draw-back technique
Ostial Pro Device: The self-expanding feet at the tip (nitinol) of the guide assist in stable positioning & provide a visual aid to align the stent at the aorto-ostial junction. The expanded nitinol legs prevent the entry of the guiding catheter into the target vessel, mark the plane of the aortic wall, & align the tip of the guide with the aorto-ostial plane.

Figure 6: Ostial Pro™ Stent system
Szabo or ‘tail-wire’ technique:

A) Both vessels are wired. The stent is loaded onto the first wire in the usual way, but before insertion into the guide catheter the proximal (stiff) end of the anchor wire in the second vessel is carefully threaded through the most proximal strut of the crimped stent.

B) The stent catheter should move freely over both wires and is then advanced into the ostial lesion until the anchor- or tail-wire in the second vessel prevents further onward motion. Correct positioning is confirmed by slight bending of the anchor wire at the bifurcation, and the stent is then deployed, initially at 6-8 atm.

C) The second wire is then removed and high pressure inflation of the first stent is performed. This should result in full stent deployment with complete ostial coverage and no impingement of struts across the vessel.
Flash system
Case 1:
Case 2:
Case 3: