Step-by-step Procedure Overview

PulseCath
Engineering the Pulse of Life

Insertion of SLR Catheter

1. Perform femoral access evaluation (angiography, vascular ultrasound, or computed tomography). If there is no significant vascular disease or tortuosity, the SLR approach may be considered.
2. Introduce a 6 Fr sheath into the common femoral artery.
3. Deploy a large bore access closure device of choice.
4. Introduce a 0.035" or 0.038" super-stiff guidewire into the left ventricle under fluoroscopic guidance.
5. Progressively dilate the femoral artery to 14 Fr.
6. Insert the heparinized iVAC 2L catheter with PTFE stylet over the super-stiff guidewire and advance carefully. The distal end of the PTFE tube forms a conical "tip" that protrudes beyond the catheter tip, acting as a dilator to facilitate insertion into the femoral artery.

   Once the catheter tip has passed through the femoral access site, carefully advance the catheter through the aorta, past the aortic arch branches (brachiocephalic trunk, left common carotid artery, and left subclavian artery), toward the coronary ostia.

   Retract the conical tip until the tip is protected by the catheter tip.
7. Remove the guidewire followed by the removal of the PTFE stillet and clamp the catheter connector with the metal clamp provided. Using a wet-to-wet connection technique, attach the pre-filled membrane pump to the iVAC 2l connector after removing the haemostatic valve/plug.

   Observe for air in the membrane pump before removing the metal clamp. If air is observed, remove the membrane pump, remove air, refill and redo wet-to-wet connection.
8. Connect to the IABP driver and start the pump, observe for any signs of obstruction of indications that the catheter tip has migrated to deeply. If repositioning is required – stop the IABP, reposition and restart the pump.
9. Perform percutaneous coronary intervention. Stop the IABP.

Removal with direct puncture technique

1. Remove the iVAC 2L catheter to the abdominal aorta until the catheter is in a vertical position.
   Stop the IABP.
2. Clamp the connector chamber (consider returning the blood from the membrane pump back to the patient before clamping).

   Puncture the soft connector with a standard femoral access needle proximal to the metal clamp. Introduce a long polymeric and hydrophilic 0.035 wire through the femoral access needle until the guidewire exits through the catheter tip or catheter valve and is visible under fluoroscopy.
3. Consider placing a protection wire in the radial artery or contra-lateral superficial femoral artery before removing the iVAC 2L and starting with large bore closure procedure.
4. Once the guidewire is in place, remove the iVAC 2L catheter as per IFU instructions.
5. Proceed with closure as per standard guided practice.
6. Confirm haemostasis.