

A STANDARDISED PROTOCOL FOR CONTEMPORARY ROTATIONAL ATHERECTOMY FROM DEBULKING TO PLAQUE MODIFICATION

Highly experienced European ROTABLATOR® operators

Developed a standardised protocol on the role of RA in an era of increasingly complex, calcified PCI which moves ROTABLATOR® from debulking to plaque modification.



PRE-PROCEDURAL RECOMMENDATIONS

1

GUIDE CATHETER SELECTION

- Most procedures can be performed with a **6 FR GUIDING CATHETER** which can accommodate burrs up to 1.5 mm
- A single curve that gives strong support is recommended

2

GUIDEWIRE SELECTION

- Most procedures can be performed with the ROTAWIRE Floppy
- It is important to shape the ROTAWIRE tip smoothly, to avoid loops or deep positioning in small side distal branches that might increase the risk of wire fracture or perforation

3

BURR SELECTION

- A single, small burr (1.25 or 1.50 mm) works for the majority of lesions
- Consider a burr-to-artery ratio of 0.6
- The use of a single burr is sufficient to:
 - create a channel to facilitate device delivery
 - RA can help facilitate full stent expansion
- Downsize burr if no-cross

4

PACING CONSIDERATIONS

- Positioning a temporary pacemaker should be considered when treating the right coronary artery or dominant left circumflex



PROCEDURAL RECOMMENDATIONS

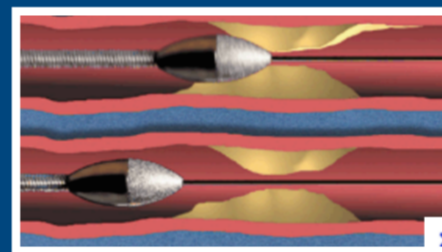


ABLATION SPEED

Between **135,000** and **180,000 RPM** to reduce risk of complications

BURRING TECHNIQUE

A pecking motion, a quick gentle push forward/pull-back movement of the burr should be used to minimize deceleration



ROTABLATION FLUSH

Infusion is important to cool rotablator and flush circulation from debris

Rotablation cocktail with verapamil, nitrates and heparin in saline recommended (5 mg/5 mg/5,000 U in 500 ml of saline)



RUN TIME

Short duration: individual runs should be no longer than **30 secs**



DECELERATION

should be **< 5,000 RPM**



DOWNSIZING BURR

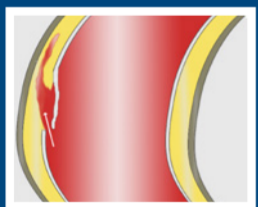
If the lesion cannot be crossed after several passes, burr downsizing is recommended



WHEN TO STOP?

Rotational atherectomy should be stopped when **sufficient plaque modification** allows **optimal balloon dilatation and stent implantation**

TECHNIQUES TO AVOID COMPLICATIONS



DISSECTION

Stop RA if severe dissection is identified



BURR ENTRAPMENT

- Controlled push & pull on the rotablation shaft
- Position a 2nd wire to allow for balloon placement
- Consider use of Guidezilla to help dislodge burr



PERFORATION

- Rotawire tip distal should be in the distal part if the main vessel, avoiding the small side branches



SLOW-FLOW

- Optimise blood pressure if low and use flush cocktail
- Be patient between ablation runs
- Use small burrs and lower speeds

SPECIFIC RECOMMENDATIONS FOR ROTATIONAL ATHERECTOMY

OSTIAL LESIONS

- Perform more extensive plaque modification and keep the coaxiality and larger guiding catheter size

UNPROTECTED LEFT MAIN STENOSIS

- Start with 1.25 mm burr and consider hemodynamic support

UNDEREXPANDED STENTS

- Rotablation is a high-risk procedure for underexpanded stents
- Availability of surgical back-up during learning may be considered

CONCLUSIONS: CONTEMPORARY ROTATIONAL ATHERECTOMY

The contemporary objective of rotational atherectomy is **Plaque Modification**. Traditionally, it was a debulking tool, now it modifies the plaque and in a simple pass of a single burr, it is enough to smoothen the vessel lumen to enable balloon dilatation and stent implantation.

The technique of a smaller burr-to-artery ratio and speed between 135 & 180,000 rpm has been improving outcomes