

# FAST FACTS ON ROTATIONAL ATHERECTOMY

## 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

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### 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

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### 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

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### 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

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### PACING CONSIDERATIONS

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



## PROCEDURAL RECOMMENDATIONS

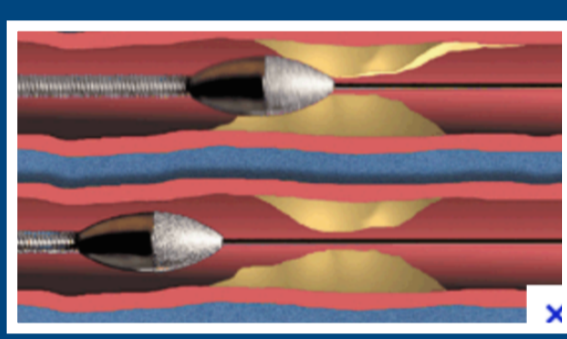


### ABLATION SPEED

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

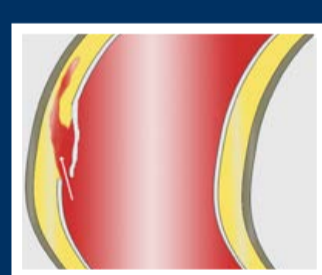
If the lesion cannot be crossed after several passes, burr downsizing is recommended



### 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 2<sup>nd</sup> wire to allow for balloon placement
- Consider use of Guidezilla to help dislodge burr



### PERFORATION

- Rotawire tip distal should be in the distal part of 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