Rotational atherectomy over retrograd wire in CTO PCIs

Andras Katona, MD
Hungary
• I, Andras Katona DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.
Rotational atherectomy

Increased prevalence of heavily calcified lesions

- Elderly
- Diabetic
- Decreased renal function

High restenosis rate w/o DES

High complication rate
Rotational atherectomy

Indications:

• Densely calcified lesions
• **Calcified ostial lesions**
• Inadequate balloon expansion
• **Uncrossable (balloon) CTOs**
• Diffuse, long atheromatosus disease
• In-stent restenozis
• Bifurcations
**„modern”**

- **PLAQUE MODIFICATIONS** - smaller burrs
- Slower spinning rate (135-170,000 / min)
- Less complication (fewer dissection / vessel rupture, slow flow phenomen)
- Fewer bradycardia, pauses
- Pecking

**„old school”**

- **DEBULKING** – bigger burr (0.7 x vessel diameter)
- High speed (180-200,000 / min)
- More complications (stucked burr, heat, clotting cascade activation)
- Drop in speed
- Continuous
Case 1

- Ostial RCA occlusion
- Good CX epicardial collaterals
- Collaterals passed easily (*Fielder FC*)
- Followed by Corsair
• Break out to the aorta with Confianza Pro 12

• Corsair followed

• Exchange to Whisper LS 300cm

• Catch it with lasso (Andrasnare, 7F JR4 GC)
Approx. 3cm should be cut at the end of the wire
• Externalised Rotawire Floppy

• Artherectomy performed with 1,5mm burr
3x37mm DES

3x19mm DES
Final result
“Balloon uncrossable” CTOs occur in 6.4% of contemporary CTO PCIs and can be successfully treated in most patients using a variety of techniques.

„...one of the most frustrating situations that may occur during a recanalization procedure is when a guidewire crosses successfully but it is impossible to advance any device over the wire through the occluded segment...”

**Tornus catheter and rotational atherectomy in resistant chronic total occlusions.**
Case 2
Impossible to cross the lesion antegrad with balloon

Antegrad wire (*Miracle 6*) out of the vessel
Sion Black easily passed the epicardial collaterals.

Both antegrad and retrograd wire get into the right ventricular branch.
Retrograd Miracle 12 find the way to antegrad GC, than trapped
Failed balloon crossing even retrograd on the trapped retrograd wire (unsuccessful „grenadoplasty”)

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Tel-Aviv, Israel
Rotational atherectomy on the externalised retrograd rotawire (1,25mm burr)
2.75x48mm DES

3x48mm DES
Final result
Conclusion

Rotational atherectomy is a feasible method to deal with „balloon uncrossable” lesions in CTO PCIs, even if it possible over an externalised retrograd Rotawire.
rock is dead

long live paper and scissors
Rotational atherectomy is a safe and helpful technique to overcome the inability of balloon catheter to cross a resistant CTO.

“Inability to cross the lesion with a guidewire is the most common reason for failure of chronic total occlusion (CTO) percutaneous coronary intervention (PCI).”

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