Tips and tricks for wiring in BTK CTO lesions without distal channel

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Four major strategies for BTK CTO without distal stump

014 Intraluminal Wiring

035 Subintimal Wiring

Dr Rha’s Flushing Technique
(Hydrostatic pressure induced spontaneous re-entry)

If distal channel is NOT visualized

014 Subintimal Wiring

Re-entry wire selection; Soft wires, Winn 80, other CTO wire

If distal channel is visualized

Success

POBA

Fail

POBA

Success

POBA

Fail

POBA

Fail

POBA
Four major strategies for BTK CTO without distal stump

014 intraluminal wiring

Success → POBA
Fail

035 subintimal wiring

Success → POBA
Fail

Dr Rha’s Flushing technique
(Hydrostatic pressure induced spontaneous re-entry)

If distal channel is NOT visualized

014 subintimal wiring

If distal channel is visualized

Re-entry wire selection;
Soft wires, Winn 80, other CTO wire

wire re-entry

Success
CASE 1. Intraluminal Wiring
Case 2. Intraluminal Wiring
Case 2. 014 wiring with supporting microcatheter
Case 2. balloon and final result
Four major strategies for BTK CTO without distal stump

014 Intraluminal wiring

035 Subintimal wiring

Dr Rha’s Flushing technique
(Hydrostatic pressure induced spontaneous re-entry)

If distal channel is NOT visualized

014 Subintimal wiring

If distal channel is visualized

Dr Rha’s Flushing technique

Re-entry wire selection:
- Soft wires, Winn 80, other CTO wires

Wire re-entry

Success
014 intraluminal wiring

035 Terumo subintimal wire tracking

1. Empirical 035 Terumo subintimal wiring using 1.5 J-tip shape can be useful until feeling *free motion* around the ankle level (Push down far beyond the ankle level is *not recommended* due to the risk of rupture, esp in calcified lesion).

2. In selective cases, infra-ankle fined channels can be found *without free motion* of 035 Terumo wire.
Anterior tibial artery CTO without distal channel
035 Terumo Subintimal Wiring (1.5J)
Anterior tibial artery CTO without distal channel
Four major strategies for BTK CTO without distal stump

014 intraluminal wiring

035 subintimal wiring

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(Hydrostatic pressure induced spontaneous re-entry)

If distal channel is visualized

Re-entry wire selection
; Soft wires, Winn 80, other CTO wires

If distal channel is NOT visualized

Re-entry wire selection
; Soft wires, Winn 80, other CTO wires

014 subintimal wiring

wire re-entry

Success
Dr Rha’s Flushing technique
(Hydrostatic pressure induced spontaneous re-entry)

1. Catheter position
   → Should be located just above the ankle

2. Flushing technique
   → forceful injection of 10cc saline combo mixed with Nitro 200 µg

3. Combo saline forceful injection
   → Hydrostatic pressure induced spontaneous re-entry

Re-entry wire selection:
- Soft, hydrophilic wires
- Winn 80 for selective wiring
- other CTO wires
- 014 subintimal wiring
Flush technique can be effective when performed in just above the ankle level (catheter tip location)
*Negotiation from Subintimal space to True lumen by
1) Soft 014 wiring
2) Selective CTO wiring; Winn80 preferred
3) 014 Subintimal wiring under microcatheter support
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(Hydrostatic pressure induced spontaneous re-entry)

If distal channel is NOT visualized

014 subintimal wiring

If distal channel is visualized

Re-entry wire selection: Soft wires, Winn 80, other CTO wires

wire re-entry

Success

Fail

Success

Fail

POBA

POBA

POBA
Rha’s Flushing technique
(Hydrostatic pressure induced spontaneous re-entry)

If distal channel is NOT visualized

014 subintimal wiring

Soft wires; 014 Fielder FC (coronary wire), HydroST, Regalia, Command and so on...
Supported by dedicated microcatheters (CXC, Rubicon, and Trailblazer...)

If distal channel is visualized

Re-entry wire selection; Winn 80, other CTO wire

035 subintimal wiring

Success
Fail
POBA

Success
Fail
POBA

014 intraluminal wiring
CASE 1; Baseline angiography
CASE 1; PTA Failure; extravasation
CASE 1; 2 days from index procedure (2nd Attempt)
CASE 1; Successful wire passage

Empirical controlled 014 CTO wiring &
Below ankle 014 subintimal wiring

5F Heatrail

Coronary 014 guidewire
(FielderFC)

Successful guidewire re-entry
CASE 1; Fielder FC successful passage
CASE 1; Sequential ballooning and final result ‘OK’
Summary: 4 major strategies for BTK CTO without distal stump

014 intraluminal wiring

035 subintimal wiring

Dr Rha’s Flushing technique
(Hydrostatic pressure induced spontaneous re-entry)

If distal channel is visualized

Re-entry wire selection;
Soft wires, Winn 80, other CTO wires

If distal channel is NOT visualized

POBA

wire re-entry

Success
Thank you for your attention
Tips and tricks for wiring in BTK CTO lesions without distal channel

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