Case of Retrograde approach

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Retrograde Wire Technique

Guidewire cross from CTO distal site through collaterals channels supplied from contrallateral vessel.
Basic concept for retrograde approach

1st step
GW channel crossing
  proper choice of channel
  correct reading angiogram
  Fielder FC, Sion blue GW

2nd step
off course, learning curve

CTO crossing after channel pass through
  Fielder XT → ultimate → conquest
  retrograde GW crossing, KWT
  r-CART
  IVUS guide
Indication of Retrograde Approach

- Failed Antegrade Approach
- Hopeless Antegrade Approach
  Unknown Entry Point
  Long CTO(>40mm)
  Heavy Calcium
  RCA Bent Point CTO
  Ante GW into Subintimal Space
- Good Collaterals
  Straight, Big, Visible
### Background of retrograde approach

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<table>
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<tr>
<td>N</td>
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<td>Re-try</td>
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<td>Diffuse</td>
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<td>Septal channel</td>
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<td>Epicardial channel</td>
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Success rate and retrograde approach for CTO

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Flow chart of retrograde approach for CTO

Retrograde 281
- Retro GW pass channel 228(81.1%)
  - Retro GW CTO pass 149(66.5%)
    - Retro POBA Channel pass 61
      - Retro POBA CTO pass 48
    - CORSAIR 83
      - CART 22
        - Procedure success 224(79.7)
      - rCART 21
        - Suc 63
          - Suc 88
            - Procedure success 17(50%)

not-pass 57(20.3%)
- KWT 126
  - Antegrade 34
    - Procedure success 17(50%)

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Case 1; Double routes of collaterals for LAD CTO
LMT+Double LAD CTO retry case

LMT 75%

1st LAD CTO

CB angiogram

RCA angiogram

LAD Prox.

LAD mid.

LAD dist.

2nd LAD CTO

LCA angiogram
Planned PCI for LAD CTO 20th, Aug, 10’
Selective injection from CB to mid LAD CTO
Ultimate go in subintima at LMT

GW into subintima

LMT 75%
Planned PCI for LAD CTO
Anchoring in LMT makes introducing Corsair

Anchor balloon

Introducing Corsair into LMT

And change Fielder XT from Confienza GW, and easy to insert into GC

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Case 2: Unknown entry LAD CTO with LMT
Collateral route for LAD CTO
Unknown entry LAD CTO with LMT

LMT 75%  LAD CTO

Septal channel

apical channel
Septal channel tracking
Retrograde wiring to LAD CTO with LMT
Retrograde GW into subintima at LMT

- Septal channel tracking
- LMT 75%
- GW into subintima
Ballooning in LMT makes introducing GW
r-CART in LMT makes introducing GW ballooning in LMT

Introducing GW into LMT true lumen

R-CART in LMT makes a retrograde GW introducing true lumen
Conclusion

1. PCI to CTO has progressed based on the advance treatment technology, devices and strategy.
2. Retrograde approach is one of epoic making new approach for tough CTO.
3. Retrograde approach is safer and reasonable for CTO combined with LMT disease.