THE LAST CRUSADE

Proctoring at its best !

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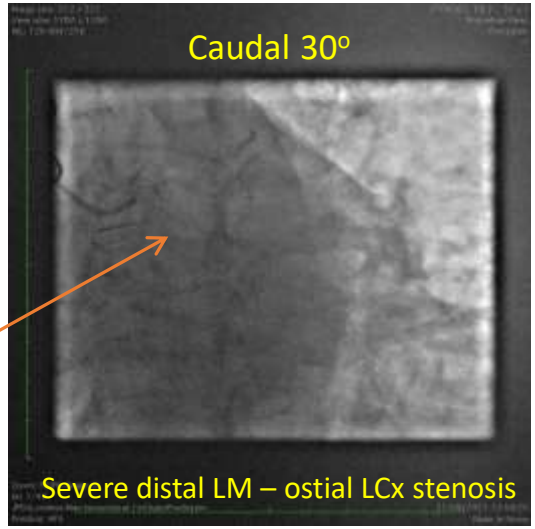
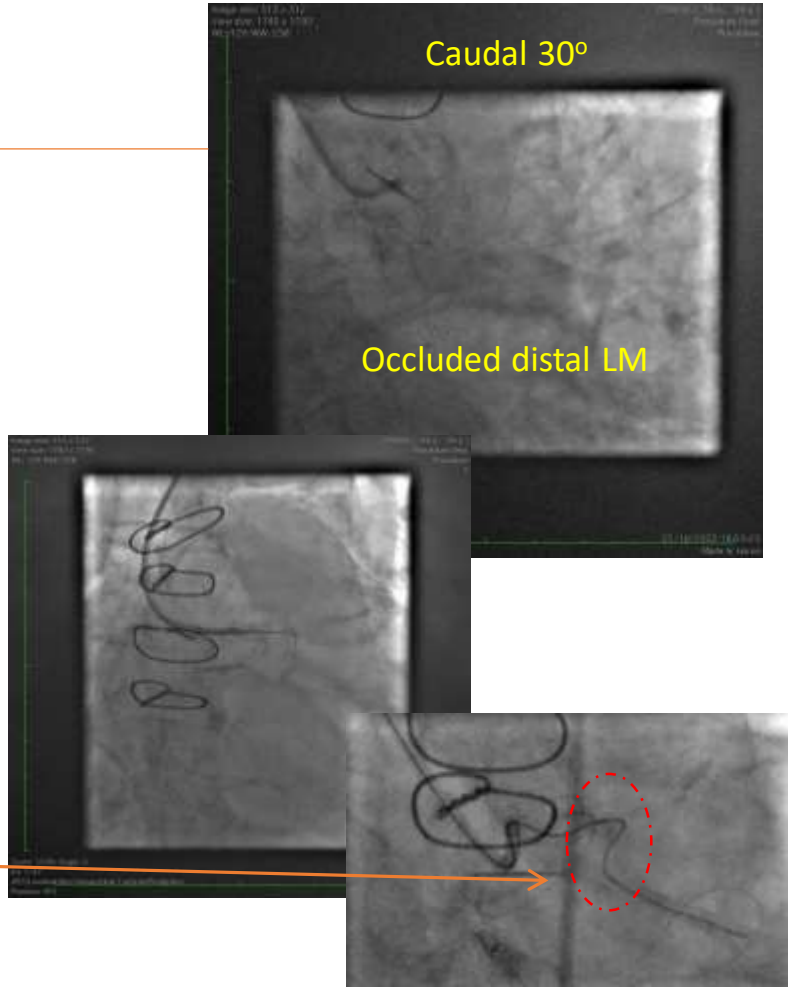
Case

- 58 year-old man
- Risk factors: active smoking, dyslipidemia, thoracic radiotherapy for a Hodgkin lymphoma in 1991
- Long history of ischemic coronary disease
  - 2008 : bypass – LIMA to LAD and left radial to PDA
  - 2012: angioplasty of ostial LM
  - 2015: Redo radial – PDA and mechanical aortic valve implantation
  - 2021: angioplasty distal LM - ostial LCx (tortuous)
- October 2022 : angina upon exertion CCS III/IV since COVID-19 infection 3 months earlier – stress perfusion scan revealing ischemia in inferolateral territory



Case

- **October 2022**
  - Distal LM – ostial LCx occluded
  - CTO ostial RCA
  - LIMA – LAD patent
  - Occluded radial graft – PDA
- Recanalisation attempted of distal LM – LCx with Gaïa 2 but without crossing the ostium of LCx with microcatheter due to severe tortuosity / stent in place
- **November 2022** – 2nd attempt from femoral access
  - Fielder XT-R in distal LCx but without crossing ostium LCx with microcatheter, SuperCross 120º and small balloon 0.85 mm

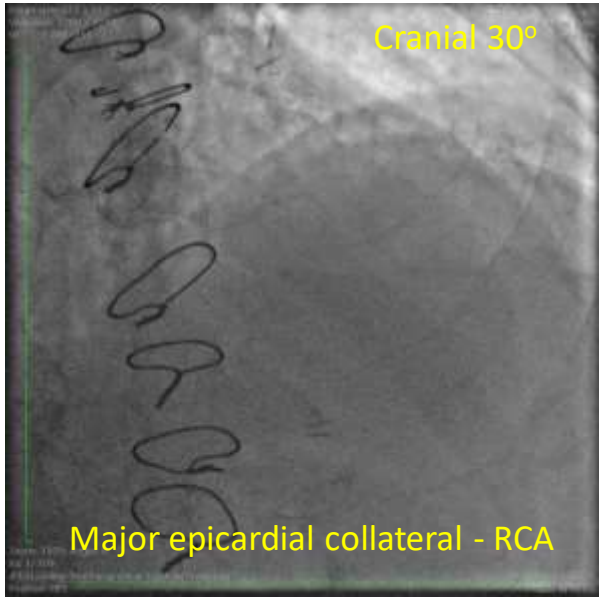


Case

February 2023

Patient willing for final attempt of revascularization since :

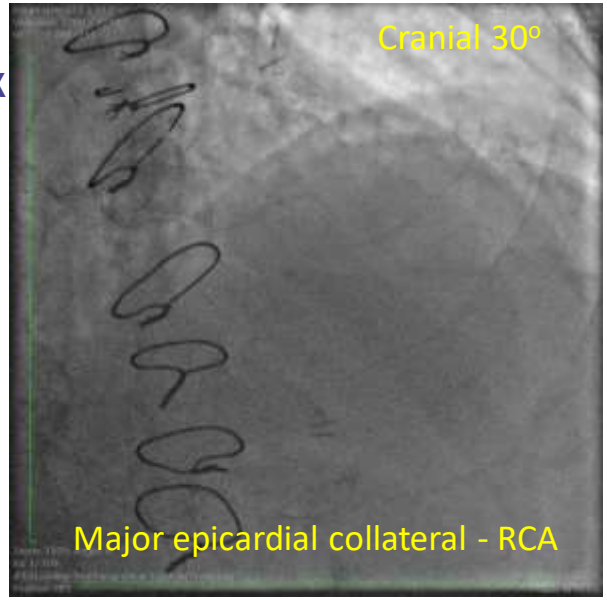
- Young and highly symptomatic
- Ischemia in inferolateral territory
- 2 failures in attempting to recanalize LM - LCx
- Complex anatomy
  - Occluded LM – LCx very tortuous
  - Occluded ostial RCA
  - Occluded radial graft - PDA
  - Only patent vessel is LIMA – LAD that convey an epicardial collateral to distal RCA



Case

Case discussion with Proctor

- Failure highly probable of recanalisation attempt of LM – LCx
- Inferior ischemia = high risk of ischemia / HD instability by recanalisation of RCA from a retrograde approach using epicardial collateral from apical LAD perfused by the LIMA !!!
- Decision to rapidly proceed with an antegrade approach of ostial RCA recanalization if failure to recanalize LM – ostial LCx
- Avoid femoral approach since patient anticoagulated

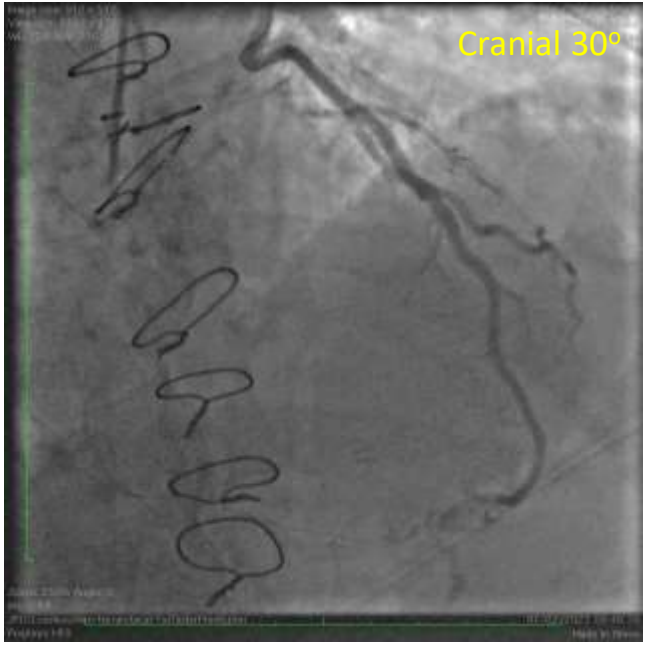


1. LM – ostial LCx recanalisation attempt

Antegrade approach

Strategy n°1

- 7Fr right radial and 5 Fr left cubital
- Guiding EBU 7Fr in left main
- Bartorelli catheter 5 Fr in LIMA with BMW guidewire
- Attempt of dissection re-entry in distal LM with Gladius MG, but guidewire does not follow the path of tortuous / high bending of circumflex artery



Failure of strategy n°1, as expected !

Strategy nº2

Target vessel : RCA

ASSESSMENT

Proximal cap : ostial RCA, ambiguous

Length: > 30 mm

Distal vessel: good re-entry landing zone

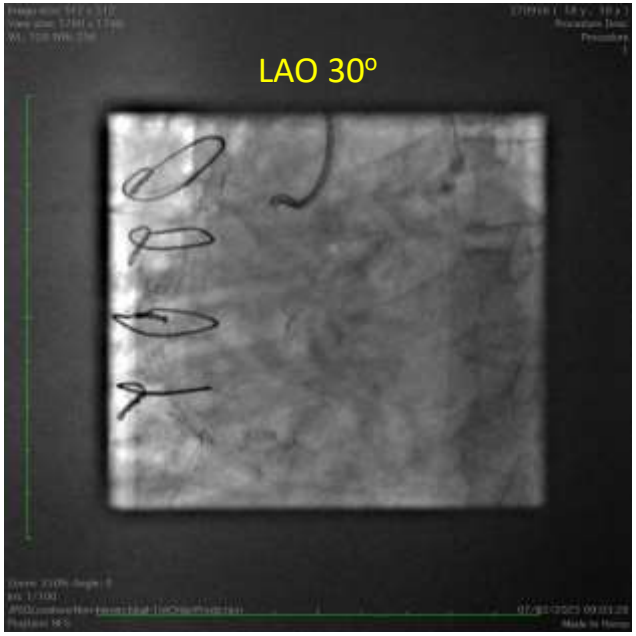
Collaterals : epicardial from distal LAD perfused by LIMA

PLAN

Antegrade approach

ADR

Retrograde approach – NOT CONSIDERED due to high ischemic risk!

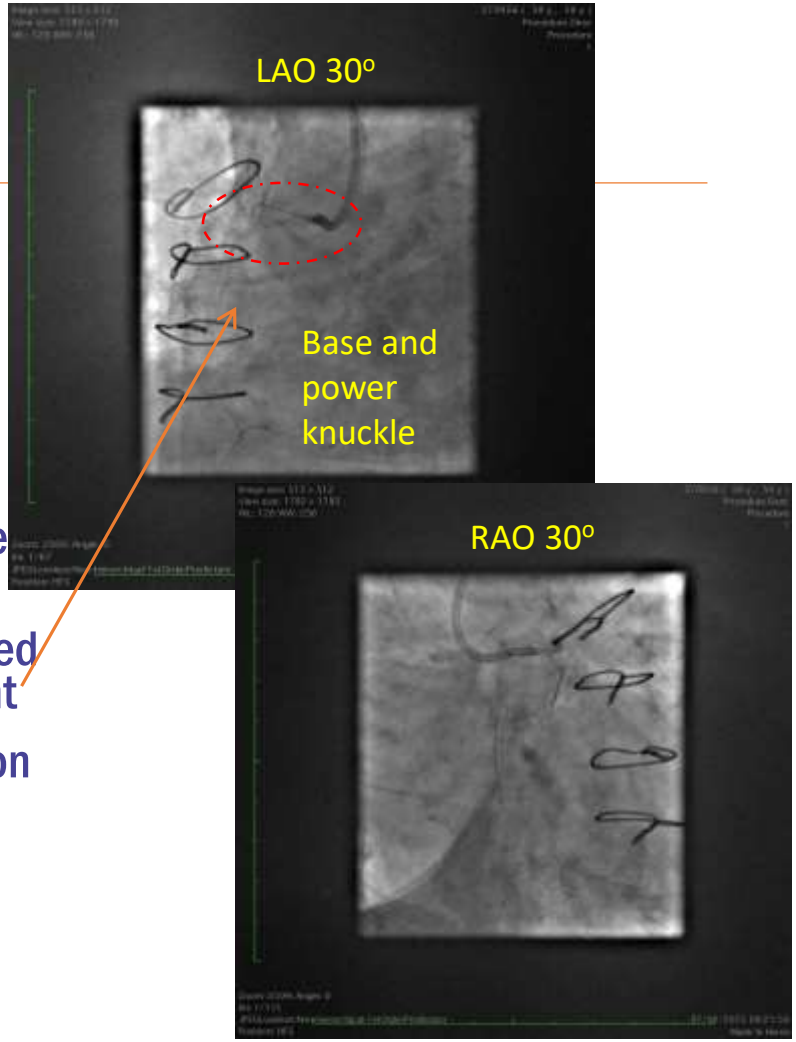


RCA recanalisation

Antegrade approach

Strategy n°2

- Guiding AL 0,75 7Fr in ostial RCA
- Distal bed visualized by retrograde injection from LIMA
- Guiding was advanced on a Gladius MG guidewire and Corsair Pro microcatheter
- BASE technique using balloon 2.0 x 10 mm inflated to create dissection and Gladius MG advancement
- Power knuckle of Gladius MG to perform dissection re-entry in mid-RCA
- In mid-RCA, switch for Miracle 6 in subintimal space

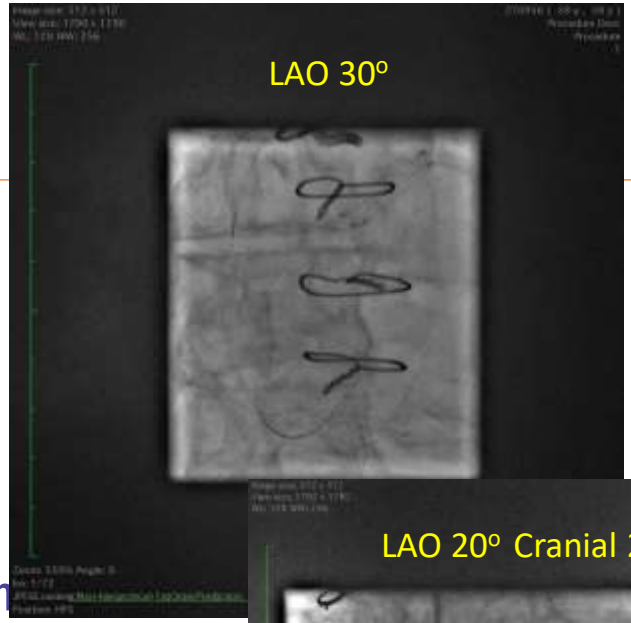


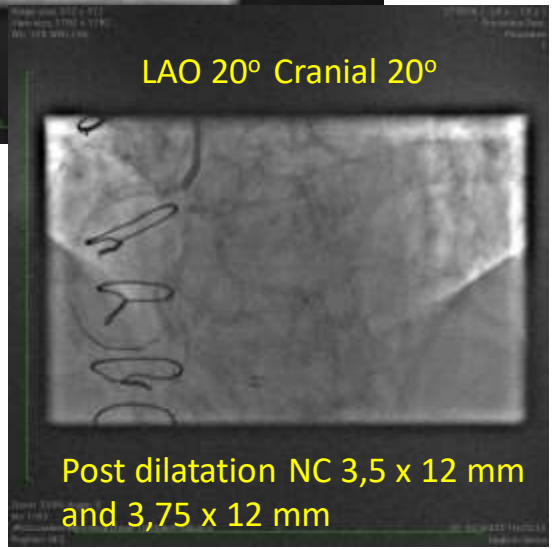
RCA recanalisation

Antegrade approach

Strategy n°2

- Stingray balloon for re-entry
- Puncture with Hornet 14
- Guidewire switch of BHW on microcatheter
- Successive predilation with compliant balloon 2,5 x 20 mm, using a Guidezilla II guiding extension to maximize support
- Angioplasty using DES 3,0 x 48 mm and 3,0 x 38 mm from distal to proximal RCA and DES 3,5 x 24 mm at ostial-prox. segment





Conclusion

- When failure to attempt CTO in symptomatic patient – call a friend !
- Have a plan in case of failure, considering risk vs benefits for each strategy
- Lack of support in ostial lesion and balloon uncrossable = BASE technique + power knuckle
- AT 6 weeks follow up, the patient was free of symptoms !!

Procedural time : 92 minutes
Contrast: 290 mL
PDS: 1632 Gy.cm^2

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