

# **Our clinical experience with the retrograde CTO approach 2008**

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# Introduction

Purposes of recanalization of chronically occluded coronary arteries:

- Improve symptoms
- Improve left ventricular function
- Improve clinical outcome (increase long-term survival)
- Reduce need for CABG
- Reduce predisposition to arrhythmias
- Increased tolerance for future coronary occlusion events



# Indication

- Proven ischemia (scintigraphy) in the area related to the CTO.
- Complaints  $> 2/4$ , optimal medication



# Strategy

- Antegrade first (real ostial lesions excluded ?)
- If retrograde approach is likely, planning is important it can be time consuming !



# Procedure requirements

- Short guiding (7-8F)
- Long balloon
- Special balloon 0.8,1.0,1.1,1.25.
- Long wire
- Snare-device ?



# Special equipement

## Guiding:

- Medtronic/Cordis 90 cm.

## Guide wire :

- 180-185-300 cm
- PT, MIRACLE, Fielder, Confianza

## Balloon catheters:

- TERUMO OTW 1.25-148
- SORIN 1.1 Acrostack 138 cm
- INVATEC OTW 1.0 145 and 160 cm
- BLUE MEDICAL 1.1-158



# Procedure/collaterals

- Epicardial
- Septal
- Others



# CTO's in the Catharina Hospital

- 246 CTO procedures in 2008 (total 4026, 7 operators).
- Of which 90 procedures performed by me.
- 35 retrograde approaches in 29 patients.
- 4 pts 2 retrograde attempts.
- 1 pt 3 attempts.





- 19 procedural success
- 19 out of 29 pts successful
- One death
- One myocardial infarction



# What have I learned sofar ?

## Remarks / Questions I

- Which collateral ?
- Dilate the collateral ?
- How to handle spasm ?



# Remarks / Questions II

- Which wire is where ?
- How to handle once the wires are on-line ?
- Snare, Aligner, Cart ?



# Remarks / Questions III

- Use special tools for a special approach
- Use over the wire



# Conclusion

- It is feasible
- It takes a learning curve
- It asks for a special approach and special tools.
- There is clinical experience, but no handbook yet.





# CTO

- INDICATION !!!!
- Orientate and concentrate
- GUIDING
- WIRE
- And/or
- COMPLICATIONS
- WHEN TO STOP



# CTO - when to stop

- Tamponade, or other severe complication.
- X = ray.
- Contrast.
- Patient operator fatigue.
- Return another time.



# CTO - remind!

- Guiding
- Over the wire, wire exchange, contrast injection.
- Contralateral injection.
- Redirect wire, two wires.
- Retrograde approach.
- Don't give up, but it is not a shame to do so.
- Wall contrast is no problem.
- Retun another time.
- Patient operator x-ray contrast.
- Be relaxed; take your time.



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