The Euro CTO Club – Aims, Objectives and Data Collected

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EuroCto Club
Founding Meeting

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Goals

Promote angioplasty for treatment of CTO in Europe

• Exchange experience among the most experienced;
• Study technologies and strategies,
• Draw information from an own registry,
• Issue ”state of the art” recommendations.
• Teaching courses
**AIM**

*highlight:*

- *misconceptions in clinical indications,*
- *outdated technical choices,*
- *inadequacies in operator training, performance and centre qualification*
- *impair the success rates made possible with contemporary techniques*
European perspective in the recanalisation of Chronic Total Occlusions (CTO): consensus document from the EuroCTO Club

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CTO DEFINITION

TIMI 0 flow and angiographic or clinical evidence of an occlusion duration $\geq 3$ months
TRAINING AND CENTRE/OPERATOR COMPETENCY

• how to select appropriately patients for CTO treatment
• experience to avoid common mistakes in recanalisation
• 2 years of training appear sufficient to work as independent primary operator,
Complex CTOs require at least experience of 200 CTO cases
Minimal number of 50 CTOs per year to maintain skills
Limited number of CTO-operators and centres with selection based on workload and audited success and complication rates.
Level 2: Easy CTO (operator experience >500 PCI including acute and recent occlusions) estimated success 80-90 %

Occlusion Age 3-6 months
Stump, Straight RCA or LAD, Short (< 10 mm)
No diffuse disease
Distal vessel diameter well visible (orthograde or retrograde)
No major bridging collaterals
Stepwise Approach to CTO Training

Level 3 Moderate difficult CTO (operator experience >1000 PCI including 100 class II CTO)

- >12 months, LCX Occlusion
- Moderate tortuosity, Length 10-20 mm
- Moderate calcification
- Strong bridging collaterals (caput medusae)
- Patient age > 80 years or extensive peripheral disease
Stepwise Approach to CTO Training

Level 4 Difficult CTO (operator experience 2500 PCI including 100 moderate severe occlusions)

*estimated success 50-70%*

- Occlusion age >> 12 months
- Ostial occlusion without stump
- Occlusion at origin of sidebranch
- Length > 20 mm
- Occlusion in bend > 60 degr or 2x >45 degr
- Severe, diffuse calcification
Euro CTO Club membership

- 2006: 13 members
- 2007: 21 members
- 2008: 29 members
- 2009: 33 members
Attempted CTOs of all PCIs (Institution) and Success (personal)

NHLBI 1997: 79.7%
NHLBI 2004: 71.4%
EuroCTO 2006: 75.1%
EuroCto2007: 77.1%

N = 3591
3090
2007: 21 Centers PCI: 32801
CTO: 3090  (9.4%)
Personal CTO Experience 2007: 1567 mean /operator 75
2007 OTW to begin with 65 %
Contralateral injection 2007: 44.2%
Success 2007  77.1 %
Procedure and X-ray time 2007
88.9 min / 33.4 min
Retrograde Cases 2007
289 cases
European experience with the retrograde approach for the recanalisation of coronary artery chronic total occlusions. A report on behalf of the EuroCTO club

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Introduction

• 175 consecutive patients treated at 7 European Centers

• CTO defined as > 3 month occlusion duration and TIMI grade 0 flow within the occlusion

• All data prospectively collected and entered into a centralised database for analysis
Treatment Strategy

- Primary: 48%
- Immediately after antegrade failure: 23%
- Second attempt after antegrade failure: 29%
Overall Success

- Failed: 17%
- Successful: 83%
Overall success rates per strategy

- Overall: 83.4% (146/175)
- Primary: 89.3% (75/84)
- Immediately after AG attempt: 65.9% (27/41)
- Second attempt: 88% (44/50)
Procedural and in-hospital outcomes

- Tamponade: 6.9%
- Dissection of donor vessel: 4%
- Wire entrapment: 0.6%
- Collateral perforation: 0.6%
- MI: 0%
- Cerebral TIA: 0%
- Death: 0%
- Re-PCI: 0%
- Emergency CABG: 0%
EuroCTO-club: Conclusions

- **In Europe CTO is most often left to medical therapy or CABG**
- **Europeans like to make everything simple,**
  - 6 French, radial, Monorail:
- **Its mandatory to consider bilateral injection, OTW balloons, dedicated wires, parallel wire, IVUS guidance and retrograde approach**
EuroCTO-club: Conclusions

There is a Lack of adequate training for complex CTOs in Europe

• Education, coaching, data collection, proposal of guidelines and research studies is the mission of the European CTO Club
• 150 international participants
• State of the art lectures (Europe, Japan, USA)
• Highly teaching taped cases from the club-members
• A lot of discussion