Advantages of Intraluminal vs. Subintimal Routes for Recanalization of SFA CTOs: How to achieve them.

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Introduction

One-third of SFA PTAs are currently performed in the setting of CTOs

• Lower technical success (20% procedural failure using traditional materials)
• Higher complications (distal embolization and perforation)
• Longer procedural times and elevated radiation exposure

Kapralos I, Eur J Rad 2014
Soga Y, J Vasc Surg 2013

Intraluminal recanalization

Advantage
• Physiological way
• Patency of collateral vessels
• Avoid re-entry related problems
• Several GW and CTO devices available

Disadvantage
• Longer procedural time
• High radiation exposure
• Higher costs

Initial and 3-year results after subintimal versus intraluminal approach for long femoropopliteal occlusion treated with a self-expandable nitinol stent

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• 902 SFA CTOs
• 651 intraluminal and 251 subintimal approach
• Technical success (91% vs 90%)
• Periprocedural complications (11% vs 13%)
• Primary patency at 3 yrs (55% vs 53%)

Disclosures

Speaker's name: Enrico Maria Marone
I do not have any potential conflict of interest

Male, 67 yo
Rest pain
Silent AMI in 1998
Left stroke in 2007
Left SFA occlusion
Intraluminal recanalization

Male, 50 yo
Recurrence of claudication (< 20 m) 3 months
Previous PTA (2009)
Previous stenting (2010)
Total SFA intrastent occlusion
Subintimal recanalization

Advantage
- Faster procedure
- Calcified occlusion
- Total SFA occlusion with no stump

Disadvantage
- Re-entry level
- Collateral vessels
- Re-entry catheters and/or devices
Subintimal recanalization

Endovascular failure

Endovascular failure

Bailout bypass

Bailout bypass

Personal algorithm

- CTO crossing device
- Subintimal approach
- Re-entry device
- Fem-pop bypass
- Intraluminal approach (dedicated GW + supporting catheter)
- Failure
- Failure
- Failure
- Failure
Conclusions

Type of endovascular revascularisation (intraluminal or subintimal) depends on:
• Operator preference
• Lesion length
• Calcium

Dedicated materials for CTO are mandatory to improve results.