How I would have treated this case

Hiroyoshi Yokoi, MD
Fukuoka Sannou Hospital
Fukuoka, Japan
Disclosure

Speaker name:

.................Hiroyoshi Yokoi..........................................................................

I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☒ Other(s)  Cook, Termo, BSJ, Medotoronic, Abott, Medicon

☐ I do not have any potential conflict of interest
80s male, CLI without dialysis

Infective gangrene on 4th toe

Risk factors
Type II DM, Hypertension
Hyperlipidemia

Previous History of
Post CABG
Post CVA
Severe AS
Lower extremities MRA

ABI: Rt 0.72, Lt not measure
SPP: RT 48/32. Lt 15/7
1st Session

Rt transfemoral approach (6F)
Lt CIA Ostial Flash Occusion
Antegrade approach (0.018 wire)
Antegrade IVUS guide retrograde 0.014 wire cross
Retrograde and antegrade stent implantation

Retrograde CIA-EIA stent
(Epic: 8.0 × 120mm)

Antegrade EIA stent
(Epic: 8.0 × 40mm)
Final DSA (1st session)
Final Ango (1st session)
2\textsuperscript{nd} Session (14 days later)  
wound not healed  
Contralateral approach is difficult due to severe calcified,  
tortuous lesion with prior stent implantation.  

Lt transfemoral approach (6F)
2nd Session (14 days later)
GW not passed due to poor backup support

Lt transfemoral approach (6F)
A Side-Grooved Guiding Sheath as an Effective Treatment Strategy for Femoro-Popliteal Artery Lesions

Shinichiro Yamaguchi, MD, Kan Zen, MD, PhD, and Daisuke Kambayashi, MD

During revascularization for chronic total occlusion (CTO) of the proximal superficial femoral artery (SFA), the guiding sheath may prolapse out of the common femoral artery (CFA) or may not be fully inserted during treatment. Therefore, we have developed a treatment strategy using a novel side-grooved guiding sheath, whereby a 5.0-Fr guiding sheath (45 cm long) with a 1.0 mm × 5.0 mm rectangular side-groove is inserted into the deep femoral artery, the side-groove is aligned with the bifurcation, and the SFA lesion treatment is performed via the side-groove. This technique provides good stability and maintains the wire’s torque performance, while avoiding sheath prolapse from its position in the CFA. We have successfully treated seven cases of SFA-CTO with this guiding sheath, and did not observe any increase in complications, procedure time, or amount of contrast media (vs. the conventional procedure). Therefore, our side-grooved guiding sheath appears to be safe and effective for treating SFA-CTO, and we hope to perform additional development of this technique.

Key words: superficial femoral artery; lesion treatment; chronic total occlusion
Novel Side-Grooved Guiding Sheath
3\textsuperscript{rd} Session (18 days later)

Wire coss to DFA

Lt transfemoral approach (5F)
5Fr Novel Side-Grooved sheath
0.018 Treasure GW manipulation with 4F CXI catheter through novel side-grooved sheath by surface echo guidance
Echo guide (SFA-DFA Bif)
Severe calcification in SFA distal
Successful SFA CTO wire cross (distal SFA)
SFA CTO BA
(Ultraverse: 4.0 × 220mm)
1\textsuperscript{st} IVUS after BA
IVUS guided 0.014 Astato 9-40 wire re-manipulation to get the intraluminal lumen with Prominent micro-catheter
SFA CTO BA 2\textsuperscript{nd}
(Ultraverse: 4.0 × 220mm)
2\textsuperscript{nd} IVUS after BA
Lesion Preparation
(Cutting BA 4.0 × 15mm)
DES Implantation

Zilver PTX (6.0 × 100mm)  
Zilver PTX (6.0 × 100mm)  
Zilva PTX (7.0 × 100mm)
DES Implantation

Zilva PTX
(8.0 × 100mm)
Post Stent dilatation with high-pressure (18atm) BA dilatation (5.0 × 100mm)
IVUS (Post BA)
BK Angio
DFA delay
(6.0 × 100mm + 4.0 × 20mm)

KBT
Final Angio
After minor amputation, wound was completely healed
6 months later (No restenosis)
1) Staged procedure were reasonable approach for CLI patients with complex multi-level PAD disease.

2) Antegrade femoral approach using a novel side-grooved guiding sheath is very safe and effective treatment for proximal SFA flash occlusion.

3) IVUS and surface-echo guided EVT may be improved long-term patency after DES implantation for long-SFA CTOs.

4) Multidisciplinary team approach is essential for limb salvage of CLI patients with PAD.
“from Fukuoka to Asia, and then Asia to the world.”
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