Novel IVUS guided techniques for achieving intra-luminal angioplasty of peripheral CTO lesions – from aortoiliac to below knee lesions –

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Disclosure

Speaker name: Yoshinori TSUBAKIMOTO, M.D., Ph.D.

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)

✓ I do not have any potential conflict of interest
Why using IVUS ??
IVUS guided strategy might help us to achieve intra-luminal angioplasty
### Eagle Eye® Platinum ST

**Transducer O.D. (F)** | Distal Shaft (F) | Prox. Shaft (F) | Frequency (MHz) | Effective Length (cm) | Minimum Guidance Catheter (F) | Maximum Guiding Wire (inch) | Maximum Viewable Diameter (mm)
---|---|---|---|---|---|---|---
3.5 | 3.3 | 2.9 | 20 | 150 | 5F (ID ≥ 0.056") | 0.014" | 20

※トランスデューサー部外径: 3.5F
3 key techniques !!
3 key techniques

1. Single 0.014 inch guidewire with IVUS guidance

2. IVUS preceding

3. Parallel guidewire with IVUS guidance (0.014 inch stiff)
Case 1.
Aorto-iliac lesion
82 y.o. Male.
Rest pain (Rutherford 4)
Single guidewire with IVUS guidance

1st wire: 014 Gladius

IVUS preceding

Systems; bi-femoral approach
GC; 6F Parent Plus + 5.5F GoGo catheter
③ Parallel guidewire with IVUS guidance
IVUS from 2nd wire
Shot-gun stenting

Post-dilatation
Final angiography
Case 2.
Femoro-popliteal lesion
80 y.o. Male.
C.D. (Rutherford 3)
Systems: Right CFA ipsilateral approach
GC: 6F Parent Plus 26cm
IVUS: Eagle Eye Platinum ST

1st wire: 014 Halberd

① Single GW with IVUS
② IVUS preceding
③ Parallel GW IVUS

Wires:
014 Astato XS9-40
014 Jupitar Tapered 45
Re-entry by Outback
IVUS

Intra-liminal re-entry by Outback
POBA 6.0mm x10min

Post balloon angioplasty
Case 3.
Below-knee lesion
89 y.o. Female.
CLI (Rutherford 5)
IVUS guided Angioplasty for ATA

Ipsilateral CFA approach
GC; 4.5F Parent Plus 55cm

1\textsuperscript{st} wire: 014 Gladius

2\textsuperscript{nd} wire: 014 Halberd

① Single GW with IVUS  ② Parallel GW with IVUS  ③ Wire crossing
Adjunctive Pedal angioplasty

Where is PTA stump ??

Single GW with IVUS

Antegrade wiring

Wire: 014 Chevalier floppy
Adjunctive Pedal angioplasty

Retrograde wiring

Retrograde wire: 014 Regalia

Antegrade wire: 014 Astat XS 9-12

Rendezvous
Balloon Angioplasty

ATA

PTA

Plantar A
“Slow flow ??”

Post Balloon Angioplasty

IVUS image

Hematoma

Small dissection
Fenestration by Cutting balloon

After fenestration

3.0x15mm
Final angiography
IVUS guided techniques enable us to perform intra-luminal angioplasty that lead to avoiding sub-intimal balloononing or stenting.

It is considered to be important performing intra-luminal angioplasty in order for properly working of DCB or debulking devices.

However, there are few data regarding the IVUS guided intra-luminal angioplasty, further studies are needed to clarify the benefit of IVUS guided strategy.
Thank You for your attention!!

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