

L I N C
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L I N C

AsiaWorld-Expo
Hong Kong International Airport
Lantau Island, Hong Kong
12 – 13 March 2019



Guide to Live Case
Transmissions



Guide to Live Case Transmissions

*During LINC Asia-Pacific 2019
21 interventional and surgical live cases
are scheduled to be performed and
transmitted to the auditorium. The aim
of this booklet is to give you an overview
about the live case schedule and to
provide a practical guide through the
procedures.*

*We hope for your understanding that
with respect to the clinical needs of the
patients changes of the schedule may
occur. Furthermore, the anticipated
procedural steps are just an outline of
the procedure. Depending on the
discretion of the operator the procedural
strategy or the choice of material
may vary.*

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Tuesday,
12 March 2019

Live from Beijing PLA Hospital, Beijing, China

Case 01 – BPH 01: male, 62 years

SFA occlusion

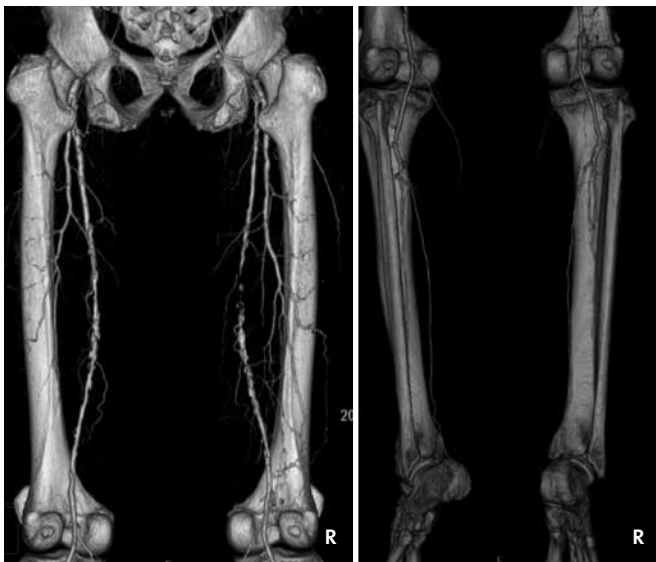
Operator: Wei Guo

Clinical data: Severe claudication right calf for 3 years, walking capacity 100 meters
Rutherford: 3
TASC: B
ABI: L 0.86, R 0.52

Risk factors: Hypertension, smoking, DM

Procedural steps

- 1. Left femoral access and cross-over approach**
 - 6F 55 cm sheath (COOK)
- 2. Passage of the occlusion**
 - 0.018" V-18 guidewire 300 cm (BOSTON SCIENTIFIC)
 - 0.018" Trailblazer support catheter, 135 cm (MEDTRONIC)
- 3. POBA and DCB**
 - 5/60 mm Armada 18 balloon (ABBOTT)
 - 5/60 mm DCB (ACOART I)
 - 6/60 mm Zilver-stent (COOK) implantation in case of severe dissection
- 4. Puncture site closure**
 - Exoseal 6F (CORDIS/CARDINAL HEALTH)



Live from Seoul National University Hospital, Republic of Korea

Case 02 – SNU 01: male, 74 years (M-H)

In-stent restenosis right SFA

Operators: Hwan Jun Jae, Saebeom Hur, Sanghyun Ahn

Clinical data: Claudication right calf
ABI: 0.76/0.96

Risk factors: CAD, former smoker

Procedural steps 1. **Antegrade approach right groin**
■ 7F sheath (TERUMO)

2. **Guidewire passage and PTA**

- 0.018" HT Command 18 LT wire 210 cm (ABBOTT) and Rubicon 18 support catheter 90 cm (BOSTON SCIENTIFIC) for intraluminal or subintimal guidewire passage

3. **Atherectomy of ISR**

- Jetstream (BOSTON SCIENTIFIC) with Emboshield (ABBOTT) or
- HawkOne (MEDTRONIC) with SpiderFX (MEDTRONIC)

4. **PTA with scoring balloon**

- Vascutrak PTA dilatation catheters (BARD/BD)

5. **PTA**

- Lutonix drug coated balloon (BARD/BD)

6. **Bail-out stenting**

- Innova stent (BOSTON SCIENTIFIC)



Live from Prince of Wales Hospital, Hong Kong

Case 03 – POW 01: female, 65 years (PLT)

Prox SFA diffuse disease and distal SFA occlusion

Operators: Bryan Yan, Skyi Yin Chun Pang, GuangMing Tan, Sven Bräunlich

Clinical data: DM/HT/Lipid/IHD
Right RF 4 claudication
ABI right 0.5, left 0.83

Angiography: Diagnostic angiogram shows right proximal SFA multi-focal stenosis and distal SFA occlusion

Procedural 1. Cross-over approach

steps

- 6F Destination cross-over sheath (TERUMO)

2. Antegrade crossing

- V18 wire (BOSTON SCIENTIFIC)
- CTO wire (ASAHI)

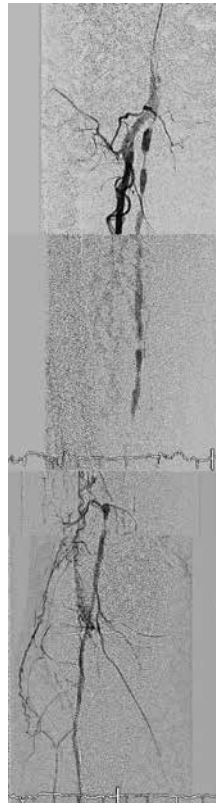
3. Retrograde distal access and wiring if antegrade failure

4. Proximal SFA directional atherectomy

- HawkOne (MEDTRONIC)
- In.Pact DCB (MEDTRONIC)

5. Bail-out stenting on indication

- Complete nitinol-stent (MEDTRONIC)



Live from Seoul National University Hospital, Republic of Korea

Case 04 – SNU 02: male, 71 years (K-L)

Chronic CTO right SFA

Operators: Hwan Jun Jae, Saebeom Hur, Sangyun Ahn

Clinical data: Claudication right calf, walking capacity 200 meters
ABI: 0.72 / 0.87

Risk factor: Art. hypertension

Procedural steps 1. **Antegrade approach right groin**

- 6F sheath (TERUMO)

2. **Guidewire passage**

- 0.018" Hi-Torque Command 18 LT wire 210 cm (ABBOTT)
- Rubicon 18 support catheter 90 cm (BOSTON SCIENTIFIC)

3. **Predilatation**

- Sterling balloon (BOSTON SCIENTIFIC)

4. **PTA**

- Passeo-18 Lux drug coated balloon (BIOTRONIK)

5. **Bail-out stenting**

- Pulsar-18 self expanding stent (BIOTRONIK)



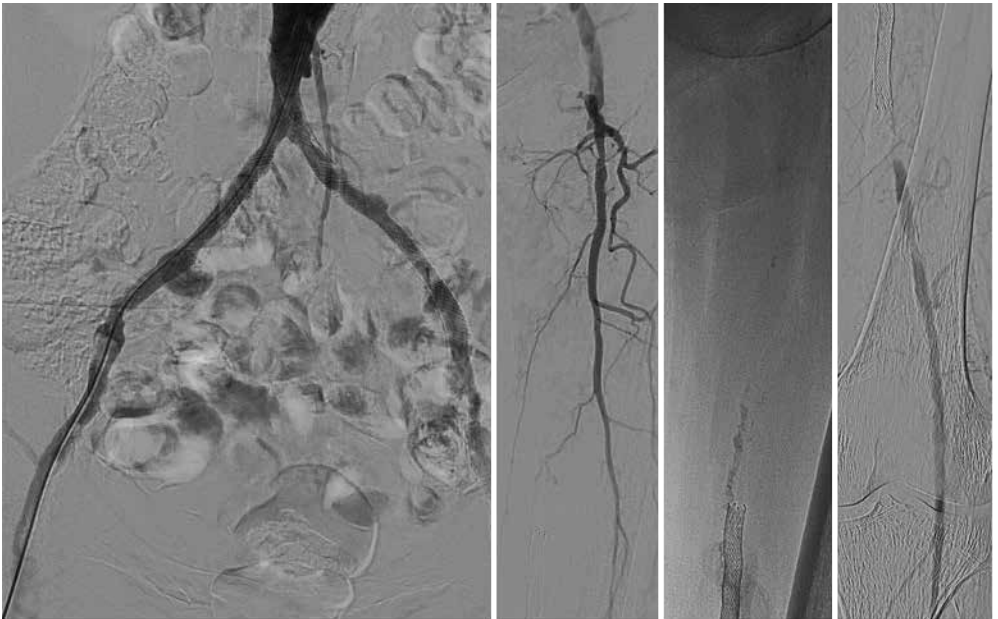
Live from University Hospital Leipzig, Germany

Case 05 – LEI 01: female, 65 years (I-5)

SFA-CTO in a patient with severe claudication

Operators: Andrej Schmidt, Axel Fischer

Clinical data: Severe claudication left, walking capacity 150 meters
 ABI left 0.67, Rutherford class 3
 PTA / Stenting of the distal SFA 2016 elsewhere
 Aorto-iliac bifurcational stenting 2015, elsewhere
 CAD, PTCA 2012
 Art. hypertension, diabetes mellitus type 2



Procedural 1. Antegrade access left

steps

- 5F 10 cm Radiofocus Introducer sheath (TERUMO)

2. Guidewire passage

- 0.018" Command 18 Guidewire, 300 cm (ABBOTT)
- Passeo 18 5.0/120 mm balloon (BIOTRONIK)

In case of failure from antegrade:

3. Retrograde approach via the distal SFA or stent-puncture

- 9 cm 20 gauge needle (B.BRAUN)
- V-18 Control guidewire, 300 cm (BOSTON SCIENTIFIC)

4. Angioplasty, DCB-treatment and stenting

- Passeo 18 Lux DCB 5.0/120 mm (BIOTRONIK)
- Pulsar 18-T3 stent (BIOTRONIK)

Live from University Hospital Leipzig, Germany

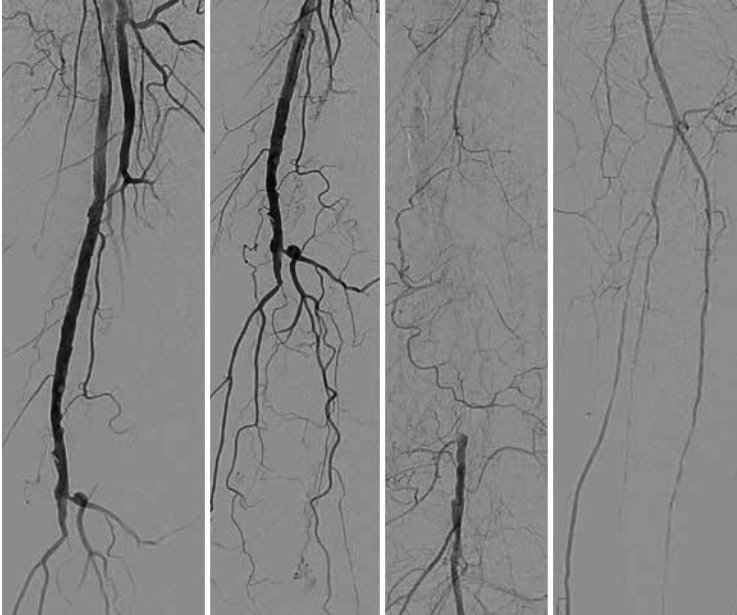
Case 06 – LEI 02: male, 62 years (F-F)

Distal SFA-CTO left

Operators: Matthias Ulrich, Manuela Matschuck

Clinical data: Disabling claudication left, walking capacity 100 meters
ABI left 0.56, Rutherford class 3
COPD, CAD

Risk factors: Art. hypertension, diabetes mellitus type 2, smoker



Procedural 1. Left antegrade access

steps

- 6F 55 cm sheath, Ansel-modification (COOK)

2. Antegrade guidewire passage

- Command 18 guidewire, 300 cm (ABBOTT)
- CXI support catheter (COOK)

In case of antegrade failure:

3. Retrograde access to the proximal anterior tibial artery

- 7 cm 21 Gauge needle (COOK)
- Command 18 guidewire, 300 cm (ABBOTT)
- CXI support catheter (COOK)

4. Angioplasty and stenting

- Advance 18 balloon 5.0/100 mm (COOK)
- Zilver-PTX stent (COOK)

Live from University Hospital Leipzig, Germany

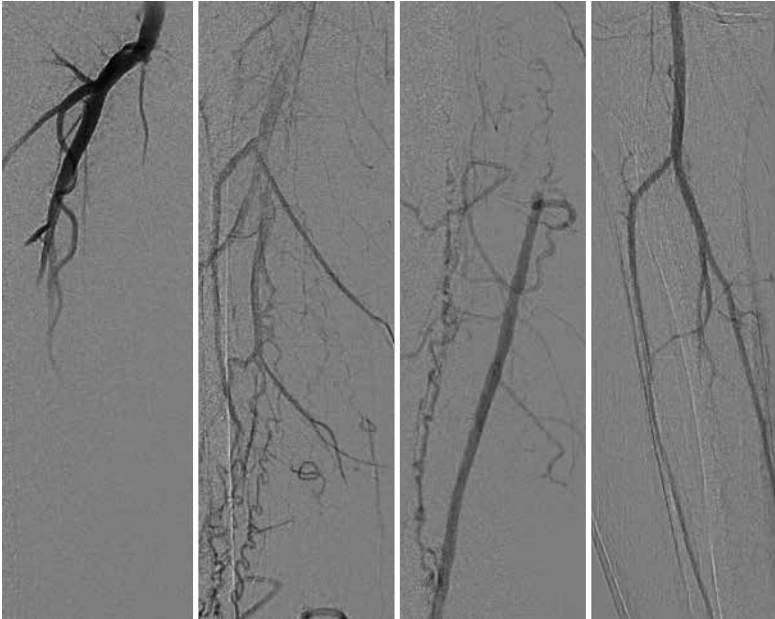
Case 07 – LEI 03: male, 63 years (F-H)

Long chronic total occlusion right SFA

Operators: Andrej Schmidt, Axel Fischer

Clinical data: Severe claudication right, walking capacity 150 meters
ABI right 0.67, Rutherford class 3
CAD, PTCA 2016
Moderate renal insufficiency (GFR 58 ml/min)

Risk factor: Art. hypertension



Procedural 1. Left retrograde and cross-over access

steps

- 6F 40 cm Balkin Up&Over sheath (COOK)

2. Antegrade guidewire passage

- 6F Judkins-Right guiding catheter (MEDTRONIC)
- CXC 0.035" support catheter, 130 cm (COOK)

3. Angioplasty and stenting

- Advance 35 balloon 5.0/100 mm (COOK)

In case of residual stenosis:

- Advance Enforcer balloon 6.0/40 mm (COOK)
- Zilver-PTX stents (COOK)

Live from University Hospital Leipzig, Germany

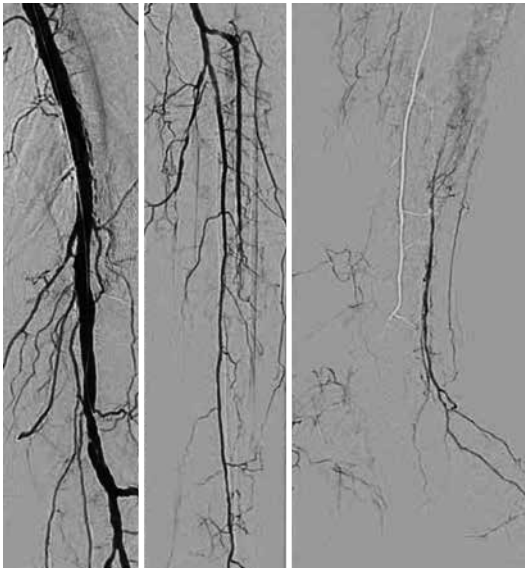
Case 08 – LEI 04: male, 76 years (F-F)

CLI with total occlusion of the anterior tibial artery left

Operators: Matthias Ulrich, Manuela Matschuck

Clinical data: Critical limb ischemia left, ulcerations dig II and III
 ABI left 0.25, Rutherford class 5
 Renal insufficiency, GFR 40ml/min
 CAD, CABG 2012
 Heart failure, EF 35%

Risk factors: Art. hypertension, former smoker



Procedural 1. Left antegrade approach

steps ■ 5F 50 cm sheath, Ansel Modification (COOK)

2. Guidewire passage

- Command ES guidewire, 300 cm (ABBOTT)
- 0.018" Seeker support catheter, 130 cm (BARD/BD)

In case of antegrade failure:

3. Retrograde approach

- Transpedal kit (COOK)
- 21 Gauge 4 cm needle, 2.9F pedal sheath
- CXI 0.018" support catheter (COOK)

4. PTA

- VascuTrak scoring balloon 2.5-250 mm (BARD/BD)
- Lutonix DCB 3.0/150 mm (BARD/BD)

Live from University Hospital Leipzig, Germany

Case 09 – LEI 05: male, 58 years (V-D)

Severely calcified occlusion right popliteal artery

Operators: Andrej Schmidt, Axel Fischer

Clinical data: Critical limb ischemia right, minor ulcerations dig 1 right
ABI right 0.44, Rutherford class 5
CAD, CABG 2011
COPD
Renal insufficiency, GFR 65 ml/min

Procedural steps **1. Right antegrade approach**

- 7F 55 cm sheath, Ansel Modification (COOK)

2. Guidewire passage antegrade

- 0.018" Connect 250 T guidewire, 300 cm (ABBOTT)
- 0.018" TrailBlazer support catheter, 90 cm (MEDTRONIC)

3. Angioplasty

Stepwise balloon-angioplasty:

- 5.0/40 mm Armada 18 balloon (ABBOTT)
- 6.0/40 mm Armada 18 balloon (ABBOTT)
- 7.0/20 mm Conquest high pressure balloon (BARD/BD) (optional)

4. Stenting

- 5.5 or 6.5 mm Supera Interwoven Nitinol stent (ABBOTT)



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Wednesday,
13 March 2019

Wednesday

Live from the Beijing PLA Hospital, Beijing, China

Case 10 – BPH 02: male, 67 years

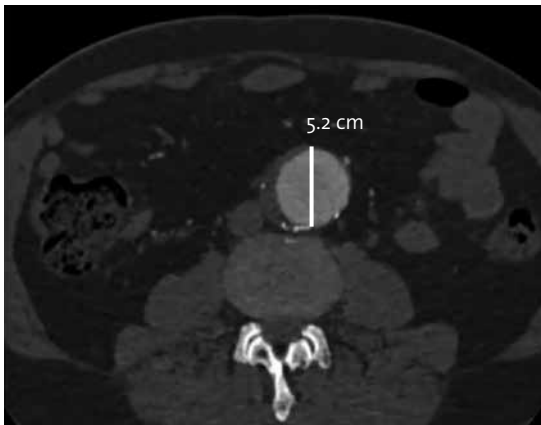
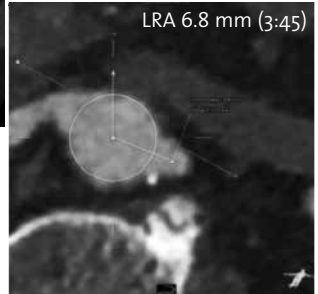
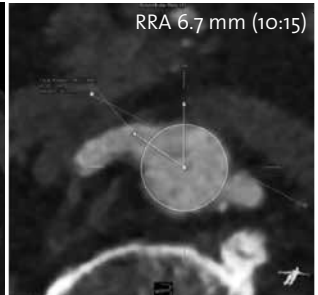
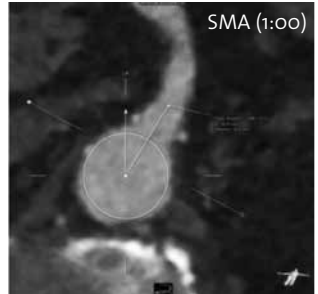
Juxtarenal AAA-EVAR with fenestrated stentgraft

Operator: Wei Guo

Clinical data: Abdominal pulsating mass detected for 3 years
Cr: 120 umol/L

Risk factors: Hypertension, smoking

- Procedural steps**
- 1. Bifemoral percutaneous approach**
 - Preclosing with Proglide closure devices (ABBOTT)
 - 2. Implantation of the main stentgraft**
 - 28/109 mm (COOK)
 - Preset Rosen guidewire to both renal arteries
 - Implanting stents 7–17 mm in bilateral renal arteries
 - 3. Implantation of the bifurcated stentgraft**
 - 24/20/94 mm (COOK)
 - 4. Implantation of iliac stentgraft**
 - 18/39 mm (COOK)
 - 5. PTA of the graft**
 - Coda balloon catheter (COOK)



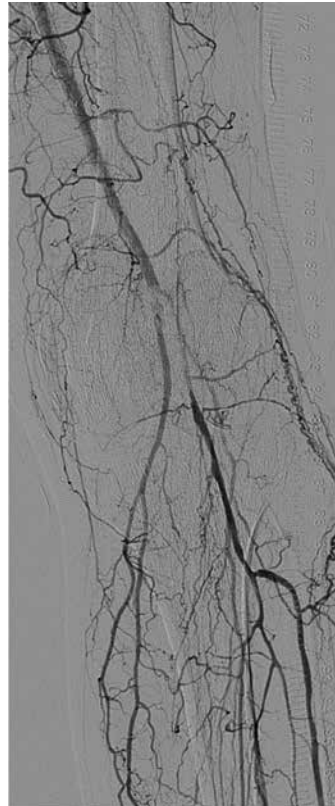
Rotational atherectomy with DCB for recurrent popliteal artery stenosis

Operators: Hwan Jun Jae, Saebeom Hur, Sanghyun Ahn

Clinical data: Severe claudication at left leg
Artery function test: 1.12/0.75 (2019.2.13)

Important items: ESRD on HD, ASO
Left SFA and POP lesion:
Initial: Jestreatm + DCB (Lutonix) at Lt POP occlusion
& DCB at Lt distal SFA stenosis (2017.5.16)
1st TLR: DCB (Passeo) at Lt POP occlusion & DES at Lt SFA (2018.3.28)
2nd TLR: DCB (Passeo) at Lt POP occlusion (2018.8.2)

- Procedural steps**
1. **Antegrade access left groin**
 - 7F sheath (TERUMO)
 2. **Intraluminal passage of the occluded segment at P2**
 - V-18 control wire (BOSTON SCIENTIFIC)
 - CXI support catheter (COOK)
 3. **Rotational atherectomy of the occluded segment**
 - Jetstream (BOSTON SCIENTIFIC)
 - Emboshield (ABBOTT)
 4. **DCB application**
 - InPACT Admiral (MEDTRONIC) or
 - Ranger (BOSTON SCIENTIFIC)
 5. **Bail-out stenting**
 - Supera stent (ABBOTT)



Live from Prince of Wales Hospital, Hong Kong

Case 12 – POW 02: male, 51 years (YCP)

Long femoral-popliteal occlusion

Operators: GuangMing Tan, Skyi Yin Chun Pang, Bryan Yan, Steven Kum, Sven Bräunlich

Clinical data: Debilitating bilateral RF3 claudication; previous PTA to right side

Risk factor: Smoker

Angiography: Diagnostic angiogram shows long CTO from mSFA to TPT

Procedural 1. Antegrade CFA 6F sheath

steps

2. Antegrade wire crossing

- V18 (BOSTON SCIENTIFIC)
- CTO wires (ASAHI)
- Navicross support catheter (TERUMO)

3. Retrograde distal tibial puncture and wire crossing

4. Optimal predilatation

5. Stenting

- Supera stent (ABBOTT)



Live from Seoul National University Hospital, Republic of Korea

Case 13 – SNU 04: male, 56 years (K-P)

Recurrent cephalic arch stenosis

Operators: Saebeom Hur, Sanghyun Ahn

Clinical data: AVF formation at 2006.6 (Radiocephalic fistula)
Last PTA for cephalic arch stenosis at 2018.6.25

Procedural steps 1. **Left arm AVF access under US guidance**

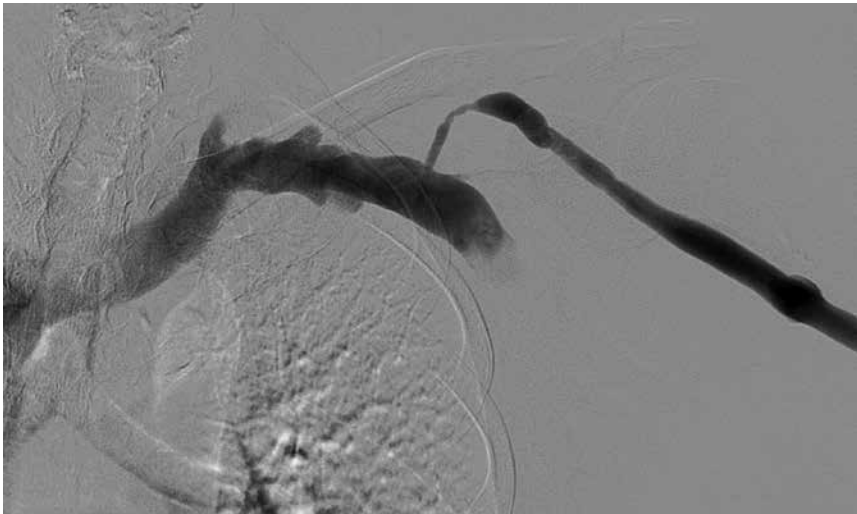
- 6F 10 cm Supersheath (BOSTON SCIENTIFIC)

2. **Guidewire passage**

- 0.035" Radiofocus soft angled guidewire 150 cm (TERUMO)
- Kumpe catheter 65 cm (COOK)

3. **Angioplasty**

- 6 mm, 7 mm/40 mm Conquest high pressure balloon (BARD/BD)
- 6 mm, 7 mm/40 mm Lutonix drug coated balloon (BARD/BD)



Live from University Hospital Leipzig, Germany

Case 14 – LEI 06: male, 58 years (G-R)

Complex aortoiliac occlusion

Operators: Andrej Schmidt, Matthias Ulrich

Clinical data: Severe claudication (right >> left), pain-free walking capacity 150 meters
ABI right 0.67, left 0.72, Rutherford class 3

Risk factors: Art. hypertension, nicotine abuse

Procedural 1. Left brachial access

steps ■ 7F 90 cm Check-Flo Performer sheath 90 cm (COOK)

2. Right femoral approach

■ 9F 10 cm Radiofocus Introducer sheath (TERUMO)

3. Guidewire passage from brachial

- 6F Judkins Right coronary guiding catheter (MEDTRONIC)
- 0.035" Seeker support catheter, 125 cm (BARD/BD)
- 0.035" stiff angled glidewire, 260 cm (TERUMO)

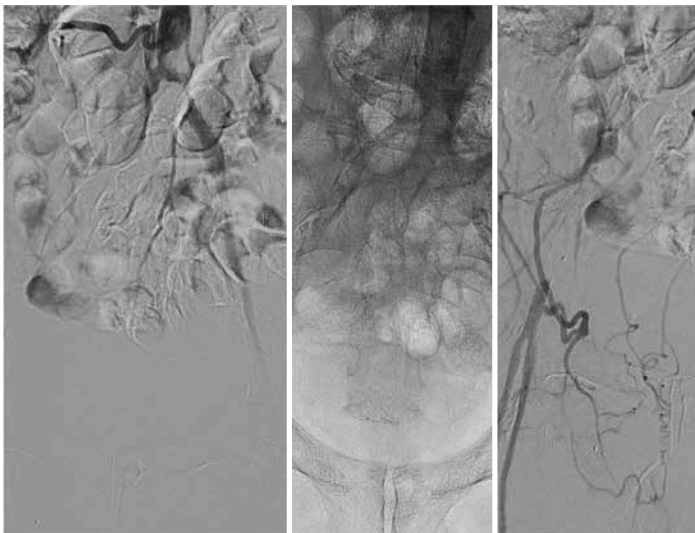
In case of failure:

4. Additional retrograde guidewire access to the CTO right iliac

- 4.0/40 mm Admiral balloon for support (MEDTRONIC)
- 0.035" stiff angled glidewire, 180 cm (TERUMO)
- potentially CART-technique

5. Stenting

- LifeStream covered stent 8.0 mm in kissing technique for the aorto-iliac bifurcation (BARD/BD)
- Covera Plus selfexpanding covered stent 8.0/100 mm right iliac (BARD/BD)



Live from University Hospital Leipzig, Germany

Case 15 – LEI 07: male, 68 years (K-T)

Subacute occlusion left popliteal artery

Operators: Matthias Ulrich, Manuela Matschuck

Clinical data: Subacute occlusion left popliteal artery, severe claudication
Permanent atrial fibrillation, previously unknown
NSTEMI 2/2019, PTCA RCA

Risk factors: Former smoker, diabetes mellitus type 2, art. hypertension

Procedural steps

- 1. Antegrade access left groin**

- 6F 50 cm sheath, Raab modification with detachable valve (COOK)

- 2. Guidewire passage**

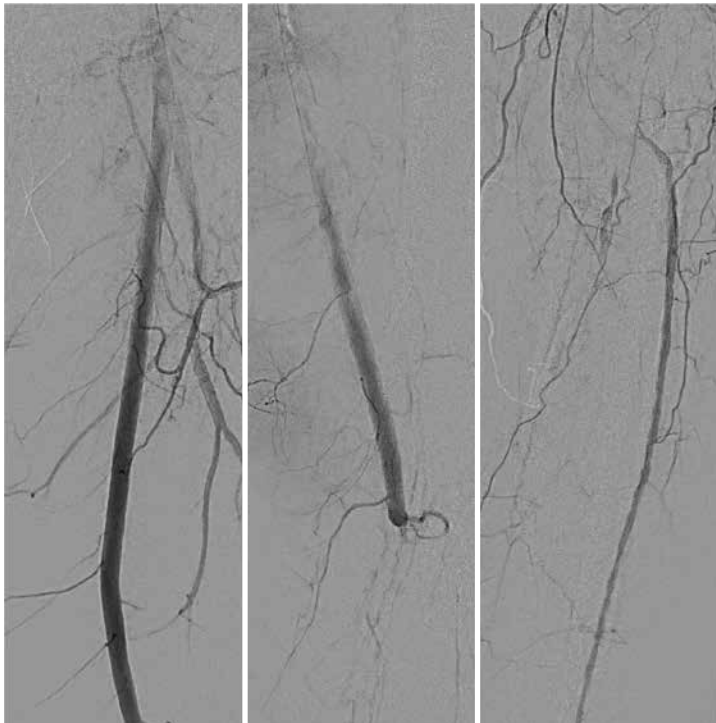
- Command 18 guidewire (ABBOTT)

- 3. Thrombectomy**

- Rotarex (STRAUB MEDICAL)

In case of incomplete thrombectomy:

- 4. Low-dose thrombolysis for < 12 hours**



Live from Prince of Wales Hospital, Hong Kong

Case 16 – POW 03: male, 62 years (TKP)

Right calcified SFA CTO

Operators: Bryan Yan, Skyi Yin Chun Pang, GuangMing Tan, Steven Kum, Sven Bräunlich

Clinical data: DM, debilitating claudication RF3 symptoms

Angiography: Diagnostic angiogram showed bilateral SFA occlusion
Refused surgery

Procedural steps 1. **Antegrade CFA**

■ 6F sheath

2. **Antegrade true lumen wire crossing**

■ V18 (BOSTON SCIENTIFIC)

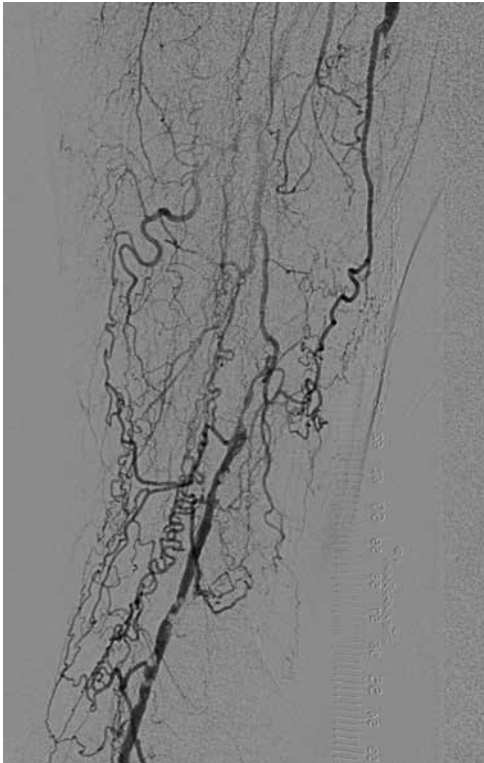
■ CTO wires (ASAHI)

■ Navicross support catheter (TERUMO)

3. **Retrograde distal PTA puncture and crossing if antegrade failure**

4. **Diamondback orbital atherectomy if no significant dissection (CSI)**

5. **In.Pact DCB +/- bailout Supera stent (ABBOTT)**



Live from from Seoul National University Hospital, Republic of Korea
 Case 17 – SNU 05: male, 81 years (I-P)

Chronic total occlusion of right SFA

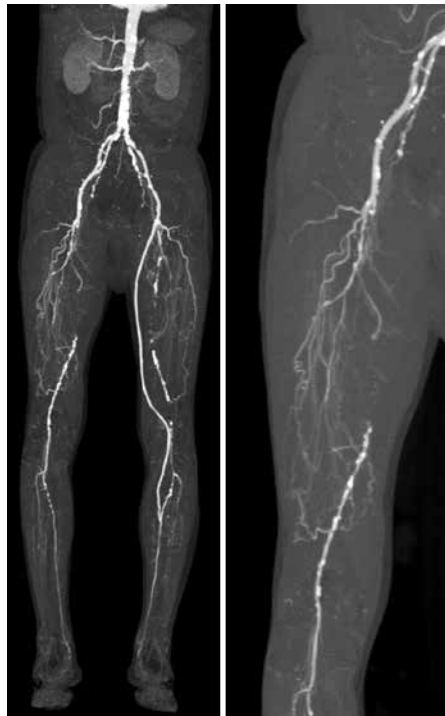
Operators: Hwan Jun Jae, Saebeom Hur, Sanghyun Ahn

Clinical data: Claudication, both legs
 ASO, s/p Lt. Fem-PTA bypass (2002/03)
 ABI: 0.48/0.64

Risk factors: DM, art. hypertension, dyslipidemia

Procedural steps

1. **Cross-over access**
 - 6F 40 cm Balkin sheath (COOK)
2. **Guidewire passage**
 - 0.035" Radiofocus soft angled guidewire 150 cm (TERUMO)
 - Rubicon 35 support catheter 90 cm (BOSTON SCIENTIFIC)
3. **Retrograde puncture in the right distal SFA**
 - V-18 control wire (BOSTON SCIENTIFIC)
 - CXI support catheter (COOK)
4. **Predilatation**
 - Vasctrak PTA dilatation catheter (BARD/BD)
5. **Drug eluting stent implantation**
 - Zilver-PTX (COOK)



Live from University Hospital Leipzig, Germany

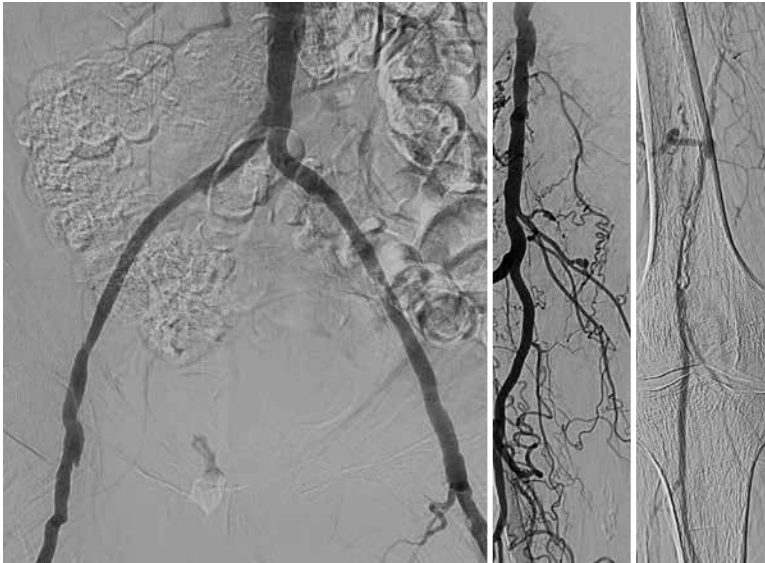
Case 18 – LEI 08: male, 72 years (G-B)

Long CTO right SFA in a CLI patient

Operators: Andrej Schmidt, Axel Fischer

Clinical data: Critical limb ischemia right, minor ulceration bilateral forefoot
ABI right 0.54, left 0.65; Rutherford class 5
PTA left iliac and left profunda femoris 2/2019
CAD; CABG 2016
Diabetes mellitus type 2

Risk factors: Art. hypertension, former smoker



Procedural steps 1. **Left femoral retrograde and cross-over access**
■ 6F 40 cm Balkin Up&Over sheath (COOK)

2. **Antegrade guidewire passage**

- V-18 Control guidewire, 300 cm (BOSTON SCIENTIFIC)
- Sterling balloon 4.0/100 mm as support catheter (BOSTON SCIENTIFIC)

In case of antegrade failure:

3. **Retrograde approach via proximal anterior tibial artery**

- 7 cm 21 Gauge needle (COOK)
- V-18 Control guidewire (BOSTON SCIENTIFIC)
- 0.018" support catheter, 90 cm (e.g. Rubicon, BOSTON SCIENTIFIC)

4. **PTA and stenting**

- Sterling 5.0 or 6.0 mm balloon (BOSTON SCIENTIFIC)
- Eluvia drug-eluting stents (BOSTON SCIENTIFIC)

Live from Prince of Wales Hospital, Hong Kong
Case 19 – POW 04: female, 71 years (TTL)

Femoral-popliteal CTO

Operators: GuangMing Tan, Bryan Yan

Clinical data: DM/HT/Lipid, recent Rt B/T infection with ray amputation
Complicated by post op NSTEMI with PCI done
Non healing wound

Angiography: Diagnostic angiogram shows distal SFA to P3 occlusion, focal ATA lesion

Procedural steps 1. **CFA antegrade puncture under ultrasound**
■ Micropuncture kits (COOK)

2. **Antegrade crossing**
■ V18 wire (BOSTON SCIENTIFIC)
■ CTO wires (ASAHI)

3. **Retrograde distal ATA puncture and crossing if antegrade failure**

4. **Optimal balloon dilatation**
■ Jade (ORBUSNEICH)

5. **Ranger DCB (BOSTON SCIENTIFIC) +/- bailout stent**



Live from Prince of Wales Hospital, Hong Kong

Case 20 – POW 05: male, 47 years (M-C)

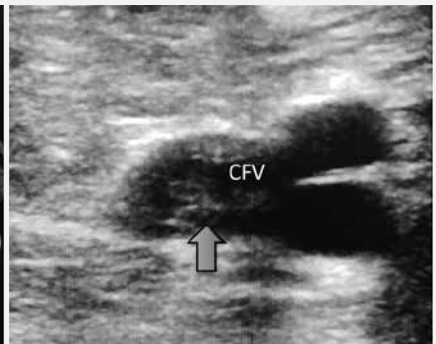
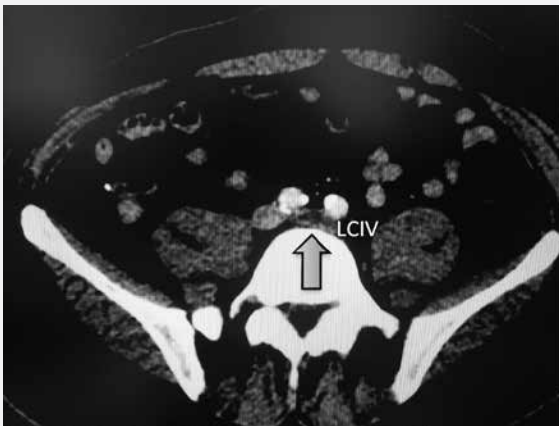
Left common iliac occlusion (May-Thurner Syndrome)

Operators: Bryan Yan, GuangMing Tan, Steven Kum, Sven Bräunlich

Clinical data: JAK2 +ve Myeloproliferative disease
History of left ilio-femoral DVT and PE 2017
Persistent left leg swelling and pain
CEAP 4 and Villalta 18

Important items: CT showed left CIV compression
Latest DUS showed proximal clot extended to left CIV with partial recanalization
Popliteal vein patent

- Procedural steps**
1. (day before) **Left popliteal puncture under ultrasound**
 - Micropuncture kits (COOK)
 2. (day before) **Antegrade crossing of left CFV-EIV-CIV**
 - Advantage wire (TERUMO)
 - Navicross support catheter (TERUMO)
 3. (day before) **Ultrasound assisted thrombolysis infusion catheter** (BOSTON SCIENTIFIC)
 4. (day before) **24 hour ultrasound assisted thrombolytic infusion**
 5. **Balloon angioplasty**
 - Conquest or Atlas (BARD/BD)
 6. **Intravascular ultrasound guided vessel sizing**
 - Volcano Vision PV .035 (PHILIPS)
 7. **Stenting**
 - Venovo stent (BARD/BD)



Live from the Beijing PLA Hospital, Beijing, China

Case 21 – BPH 03: male, 72 years

Embolization of a type-II endoleak

Operator: Wei Guo

Clinical data: EVAR of AAA 1 year ago, diameter increasing 5mm for 6 month, intermittent abdominal pain for 1 weeks
Hb: 121 g/L

Risk factors: CHD, smoking, DM

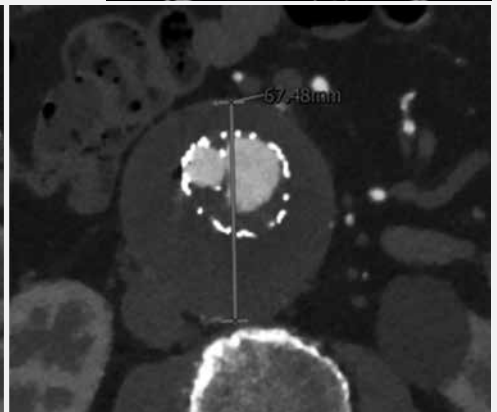
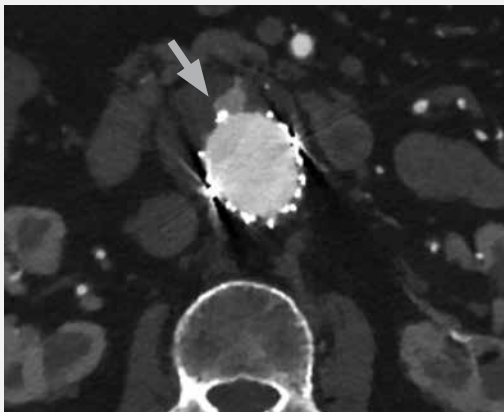
Procedural steps

- 1. Right femoral access**
 - 6F sheath (COOK)

- 2. Selective angiography of SMA and Riollans' arch**
 - Vertebral catheter (TERUMO)

- 3. Approach to IMA and embolization**
 - 0.026" microcatheter, 135 cm (COOK)
 - 0.018" 15/40 mm Interlock Coil (BOSTON SCIENTIFIC)

- 4. Puncture site closure**
 - Exoseal 6F (CORDIS)



Beijing PLA Hospital,

Beijing, China:

Wei Guo

Seoul National University Hospital,

Seoul, Republic of Korea:

Hwan Jun Jae

Saebeom Hur

Sanghyun Ahn

The Chinese University of Hong Kong,

Prince of Wales Hospital, Hong Kong:

Bryan Yan

Steven Kum (guest operator)

Skyi Yin Chun Pang

GuangMing Tan

Sven Bräunlich (guest operator)

University Hospital Leipzig,

Department of Angiology, Leipzig, Germany:

Andrej Schmidt

Matthias Ulrich

Axel Fischer

Manuela Matschuck



The venue

AsiaWorld-Expo

Hong Kong International Airport
Lantau Island, Hong Kong
www.asiaworld-expo.com

Congress production



Provascular GmbH
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