

A case of bilateral CTO from superficial femoral artery to popliteal artery treated by various methods

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Case

Case: 75 year-old-woman, Rutherford3

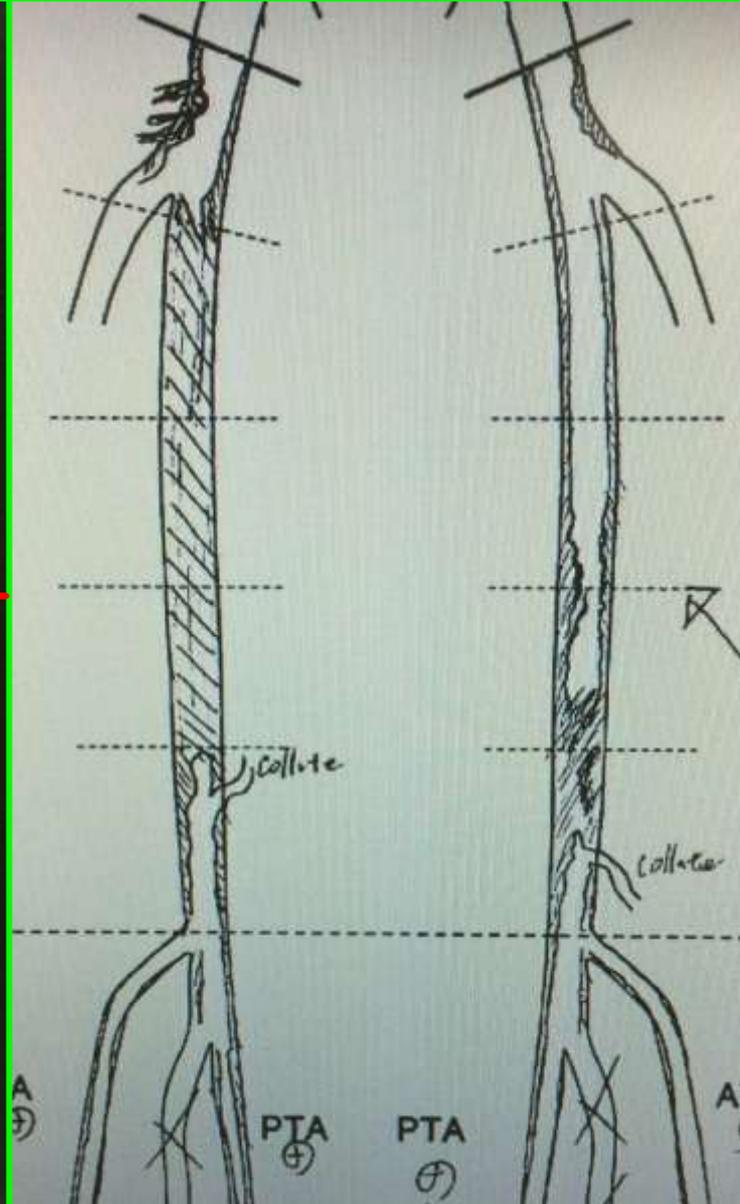
Chief Complaint: bilateral intermittent claudication

Risk Factors: hypertension, rheumatoid arthritis

Present Illness: She presented with bilateral claudication for several months. ABI was **0.55** at right leg and **0.54** at left leg. Ultrasonography and CT angiography revealed **occlusion of bilateral superficial femoral artery and left popliteal artery** .

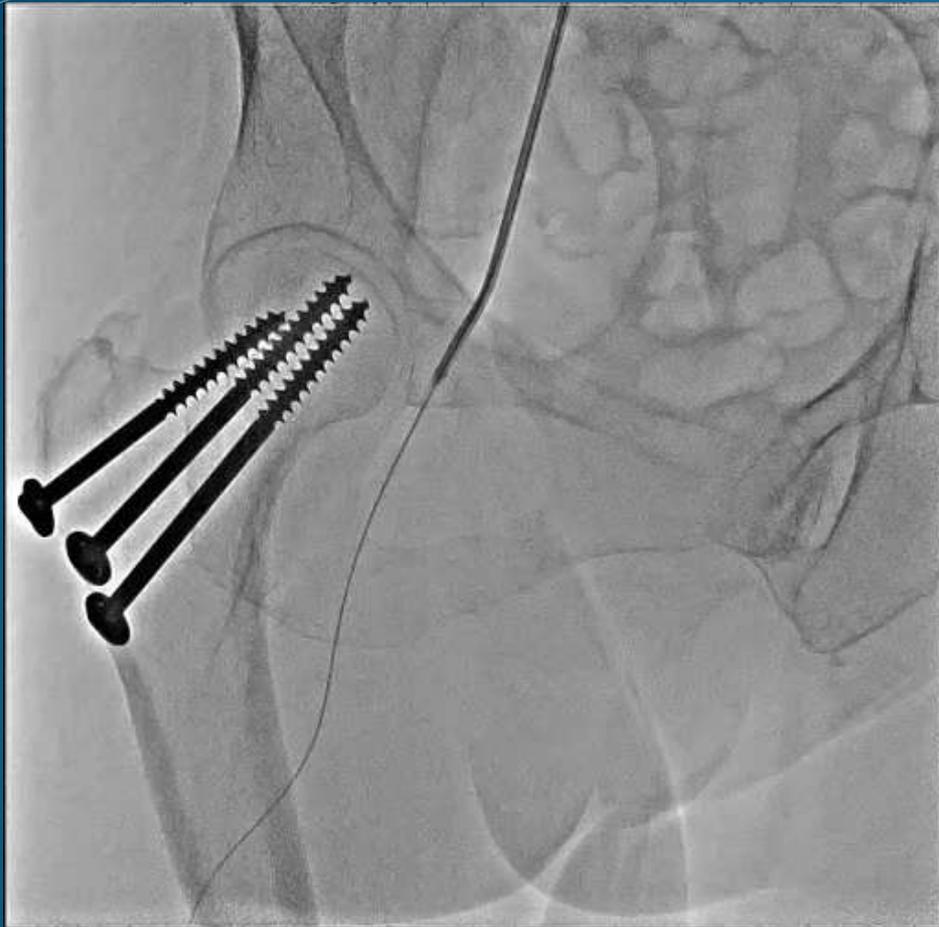
CT and Ultrasonography

occlusion of bilateral superficial femoral artery and left popliteal artery



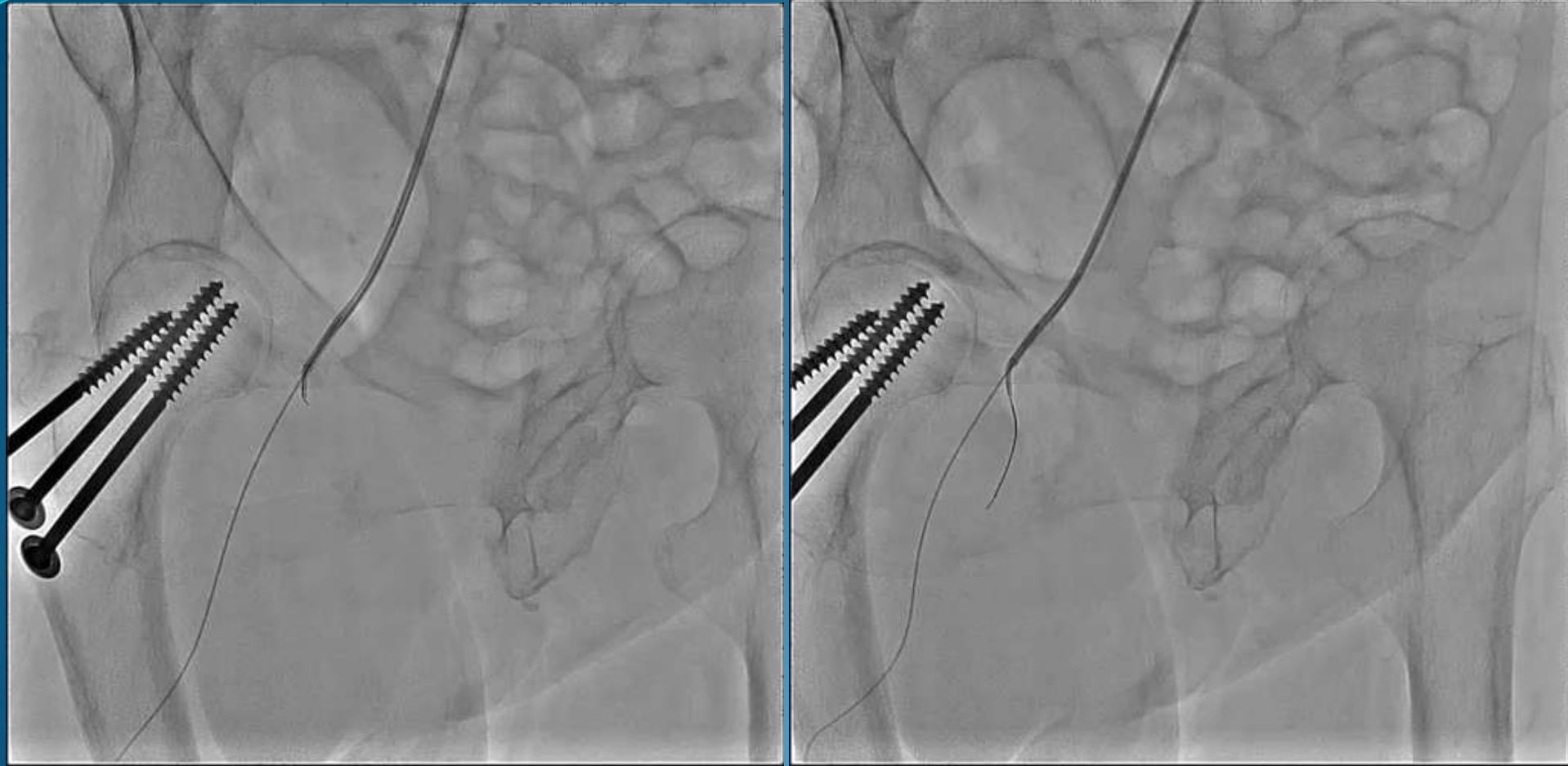
EVT(rt.SFA)

angiography



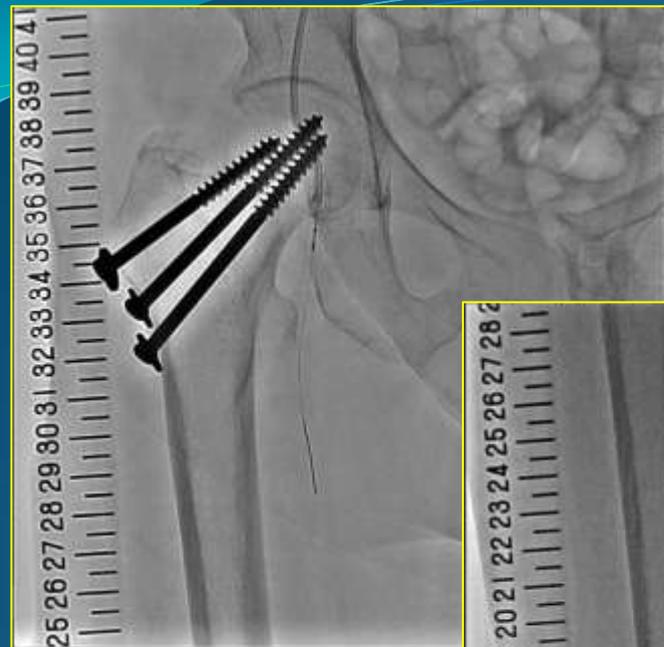
ipsilateral approach
guiding catheter: Parent plus(6Fr)

EVT(rt.SFA)



Cruise with Prominent NEO and Tempo(4Fr)

EVT(rt.SFA)



technique1



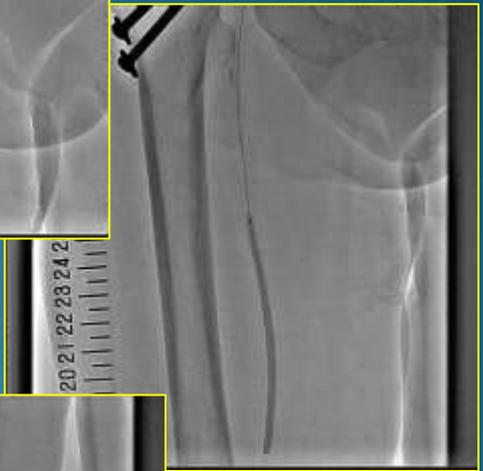
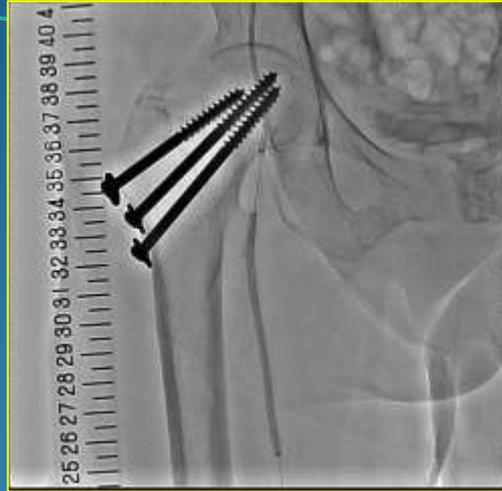
IVUS guided wiring(Ruby HARD)

EVT(rt.SFA)



Ruby HARD could advance to distal true and aspiration by TVAC was performed.

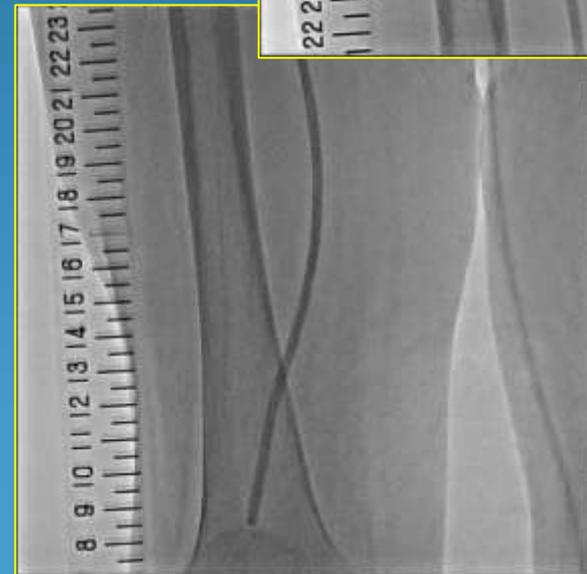
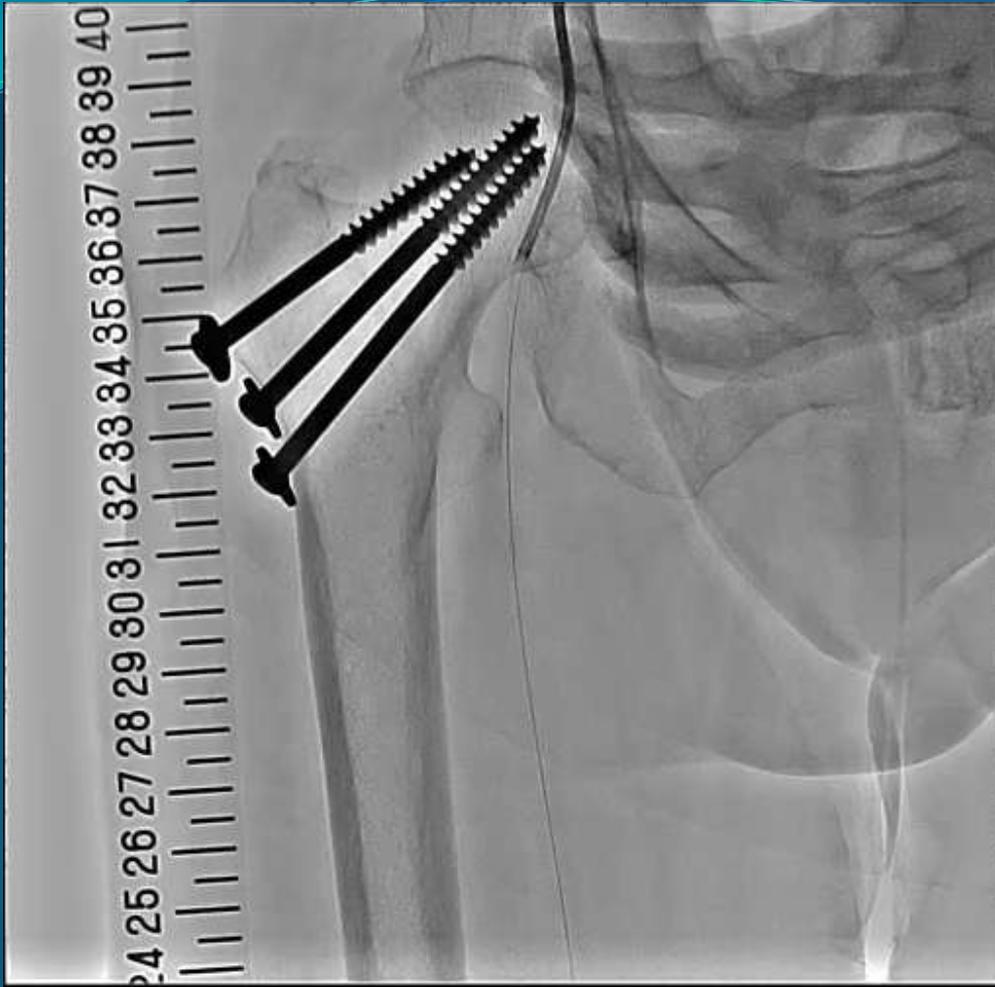
EVT(rt.SFA)



technique2

reverse angiography by TVAC and POBA(2.0mm)

EVT(rt.SFA)



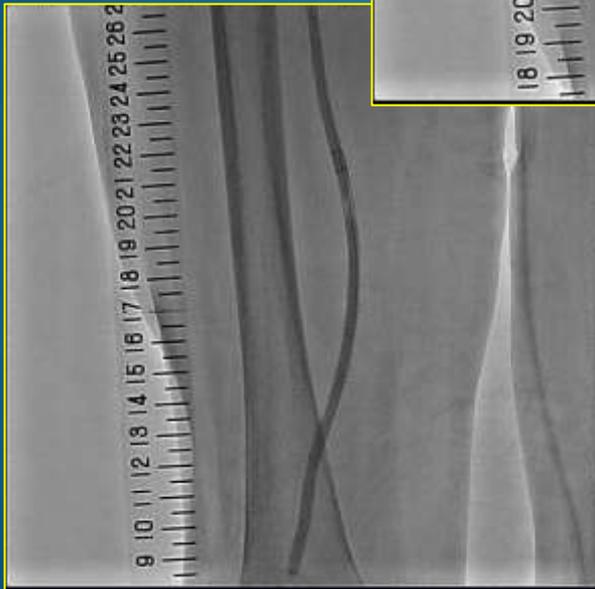
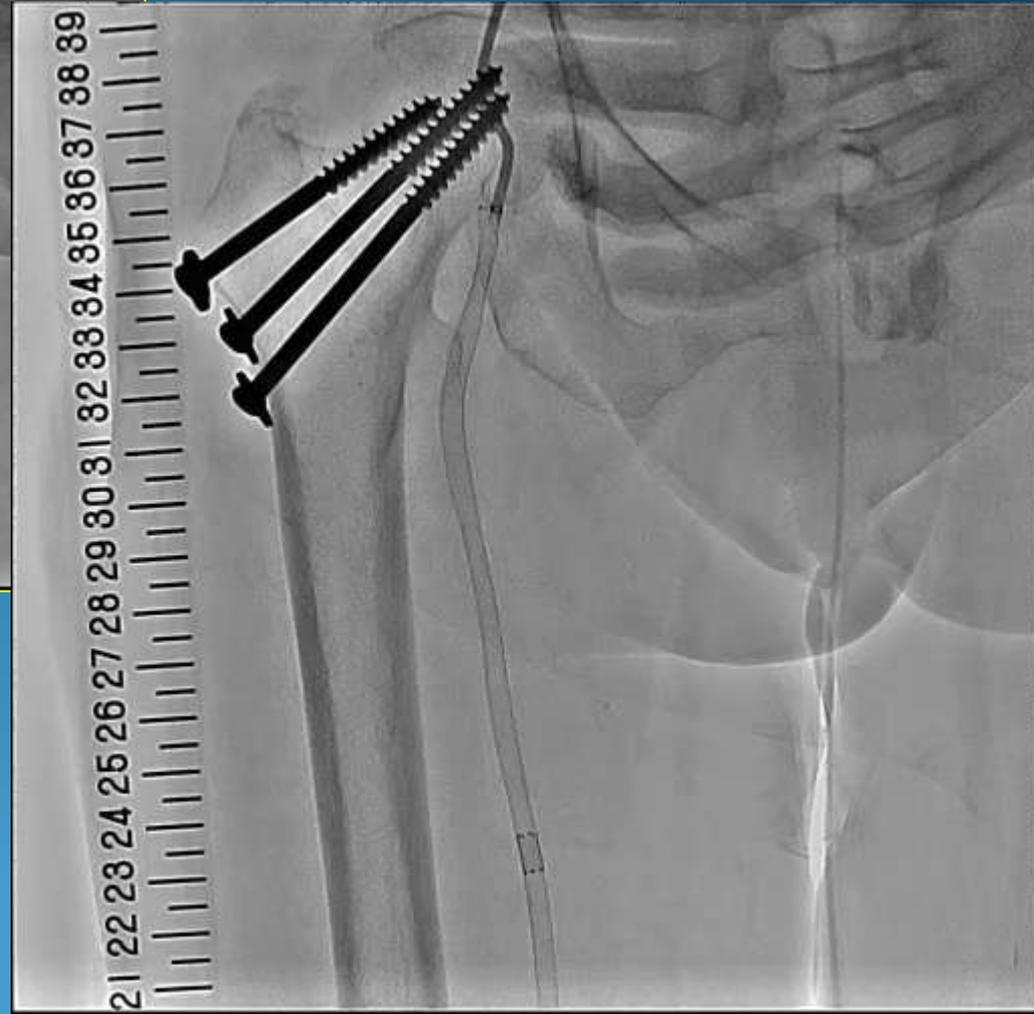
I couldn't obtain antegrade flow and POBA by 5.0mm balloon was performed.

EVT(rt.SFA)



I couldn't obtain antegrade flow after all because of vessel recoil.

EVT(rt.SFA)

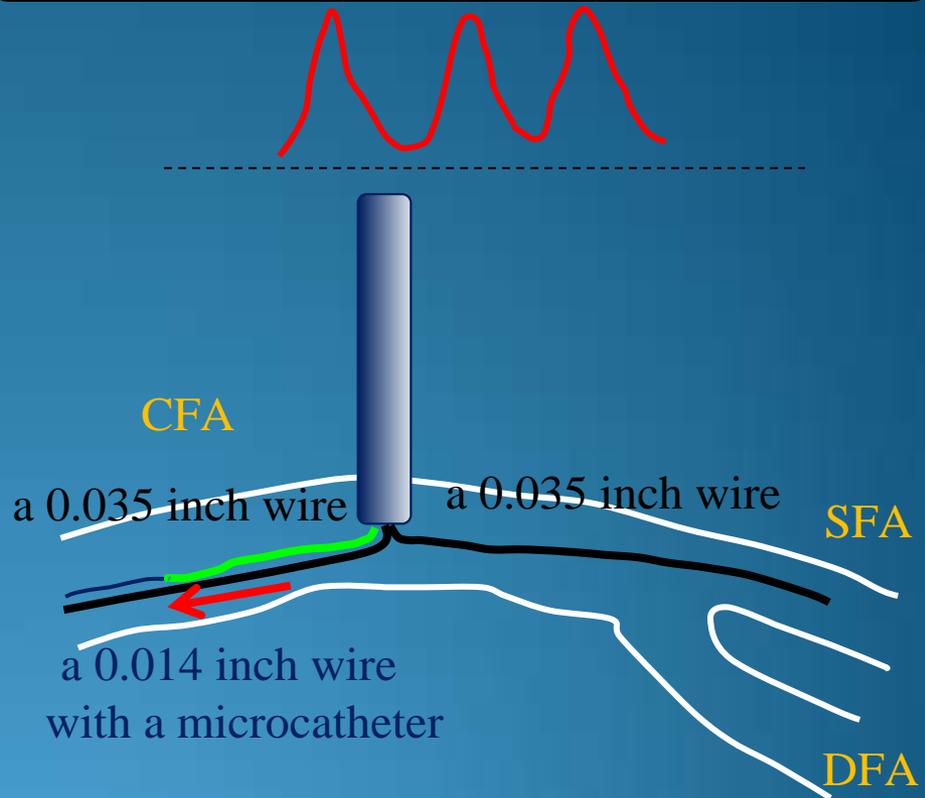
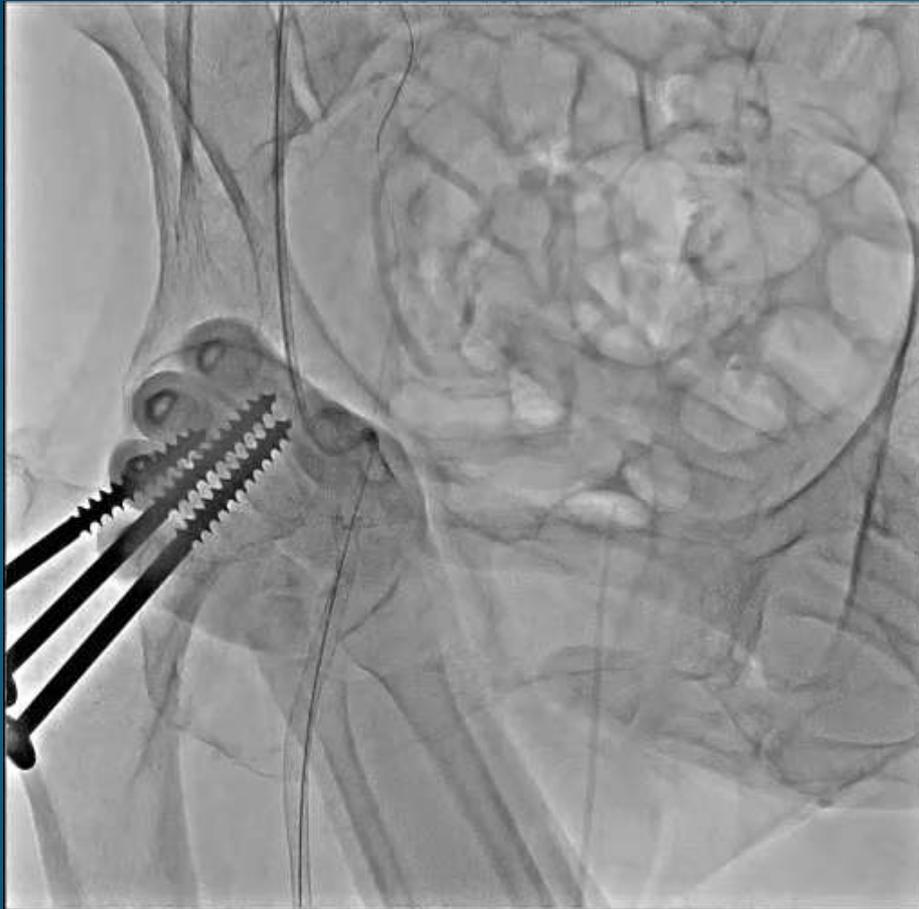


SMART 6.0x150mm+6.0x150mm

final angiography

EVT(rt.SFA)

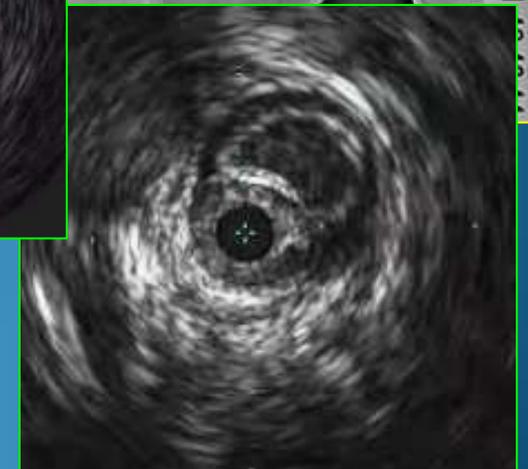
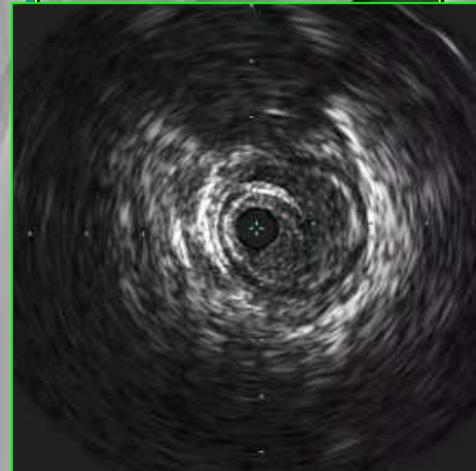
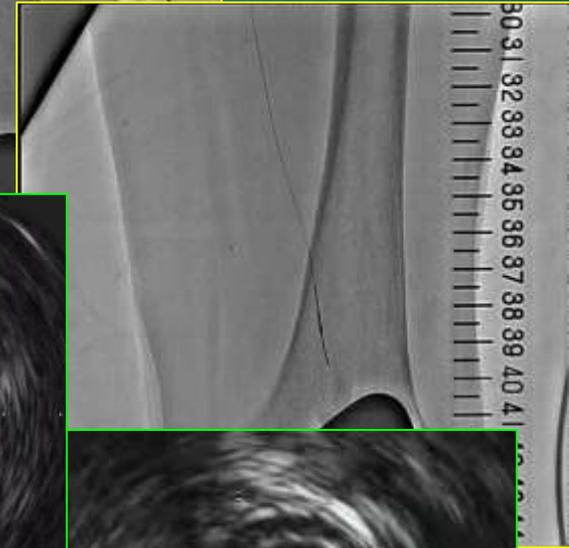
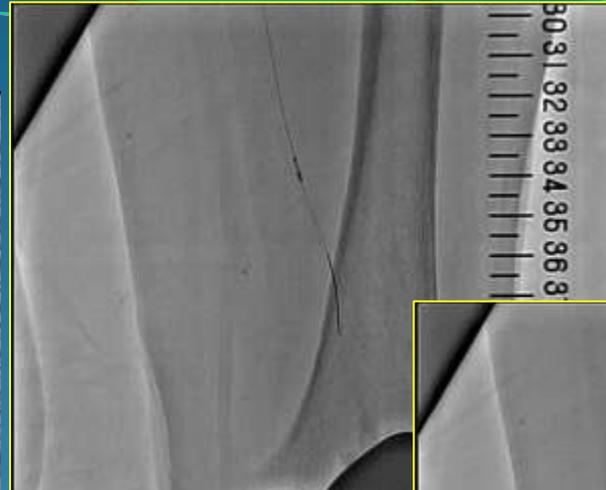
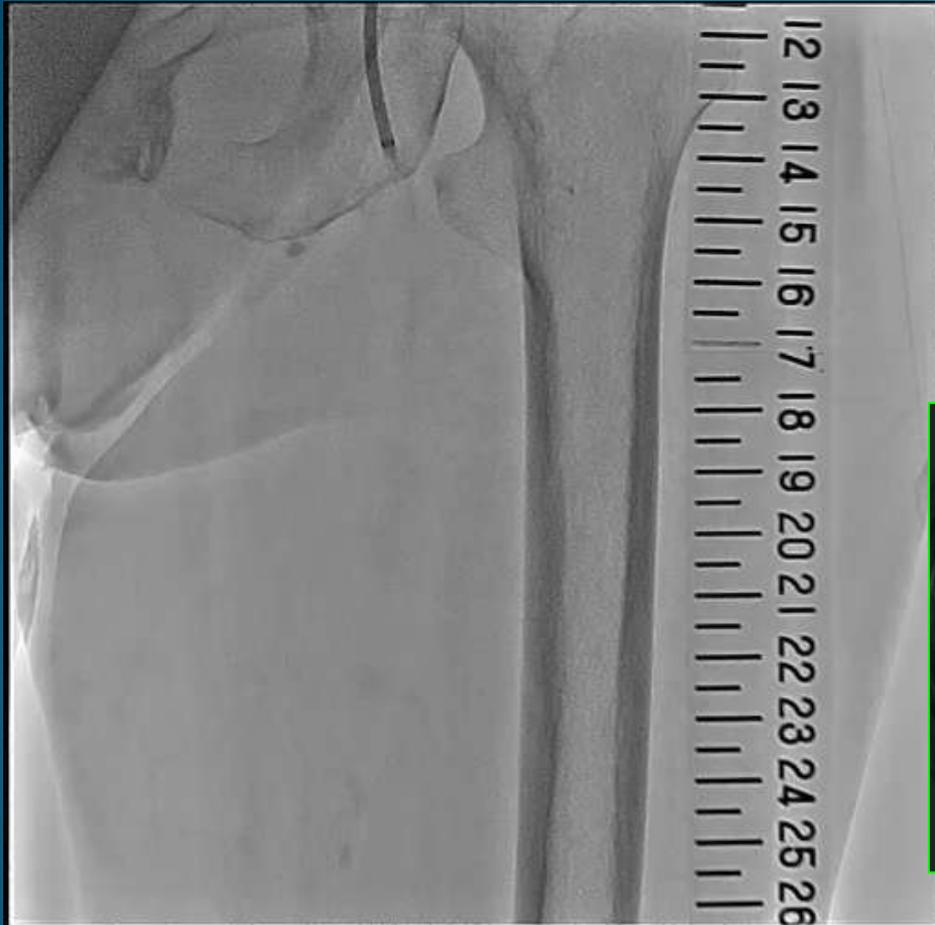
monitoring arterial pressure wave



technique3

switch back technique

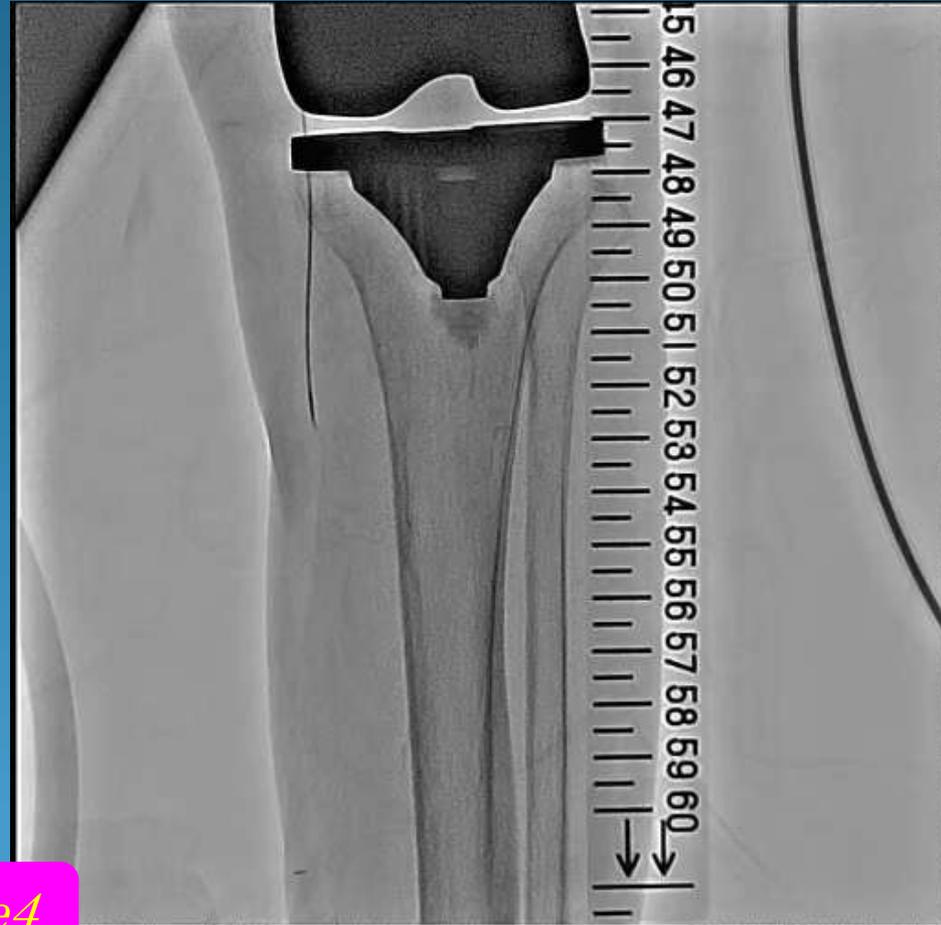
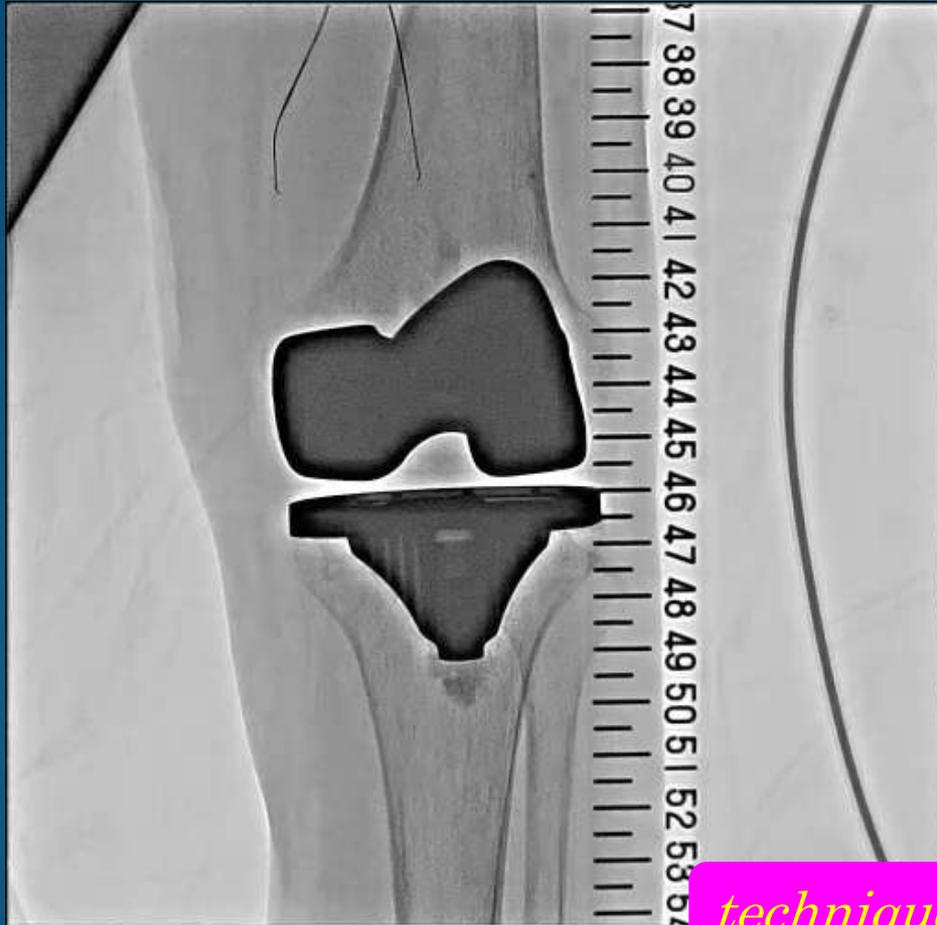
EVT(1t.SFA to POPA)



ipsilateral approach
guiding catheter:Parent plus(6Fr)

IVUS guided wiring(Ruby HARD)

EVT(1t.SFA to POPA)

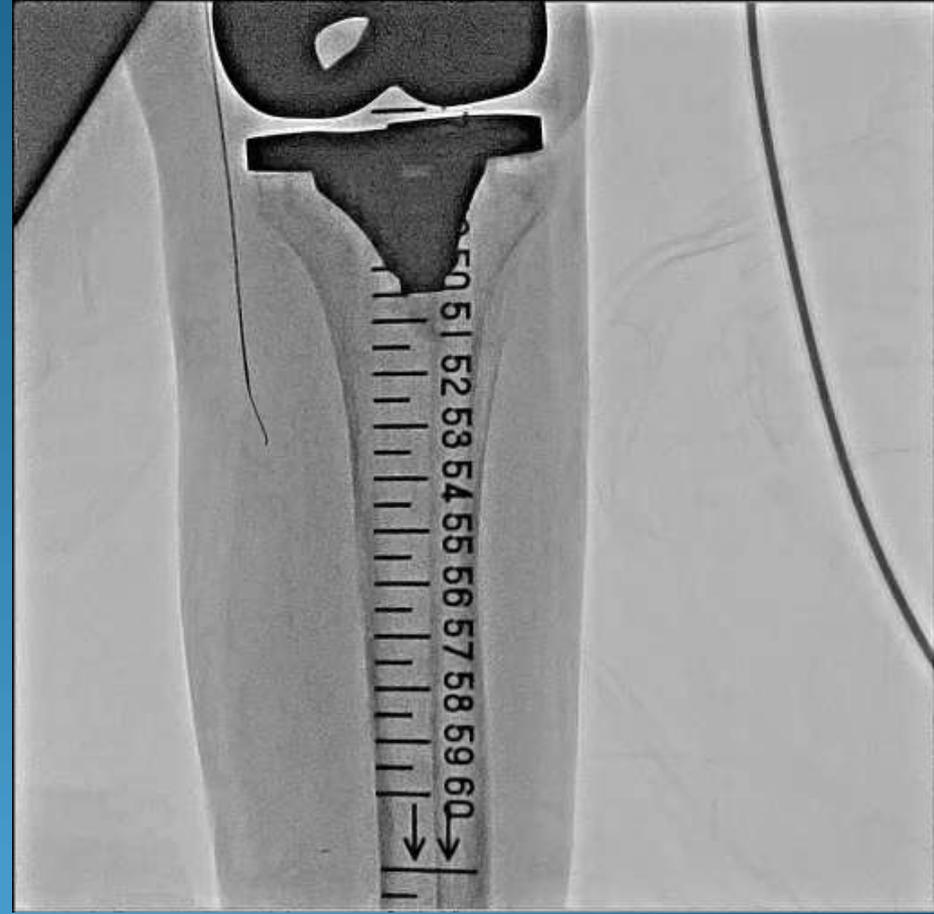
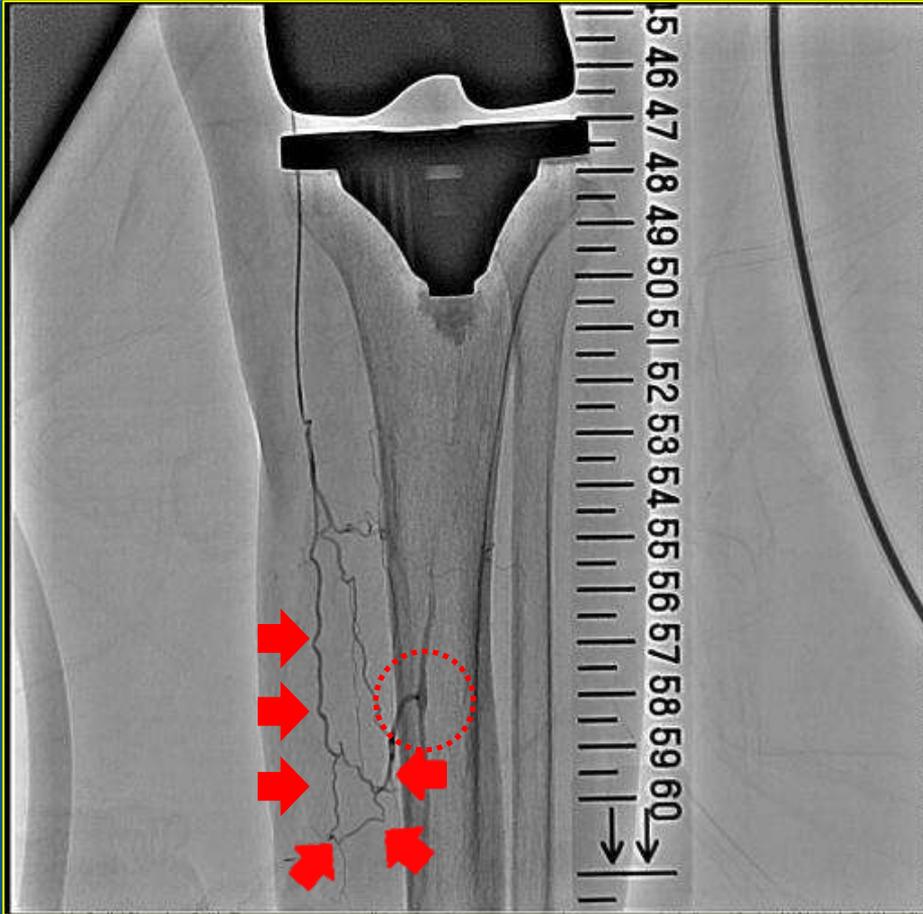


technique4

Trans-collateral angioplasty(TCA)
Cruise with Prominent

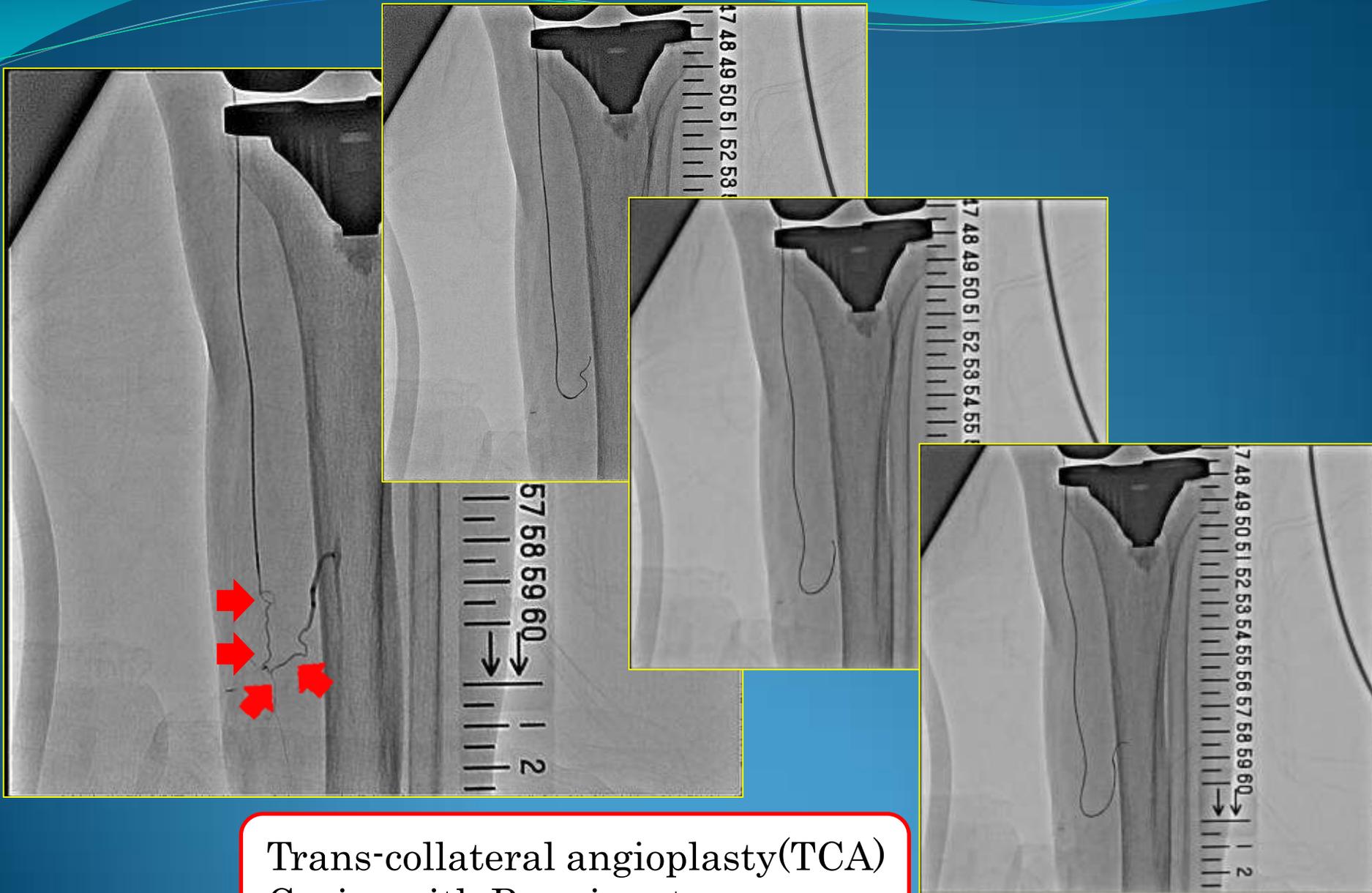
tip injection
I could confirm a connection to PTA.

EVT(1t.SFA to POPA)



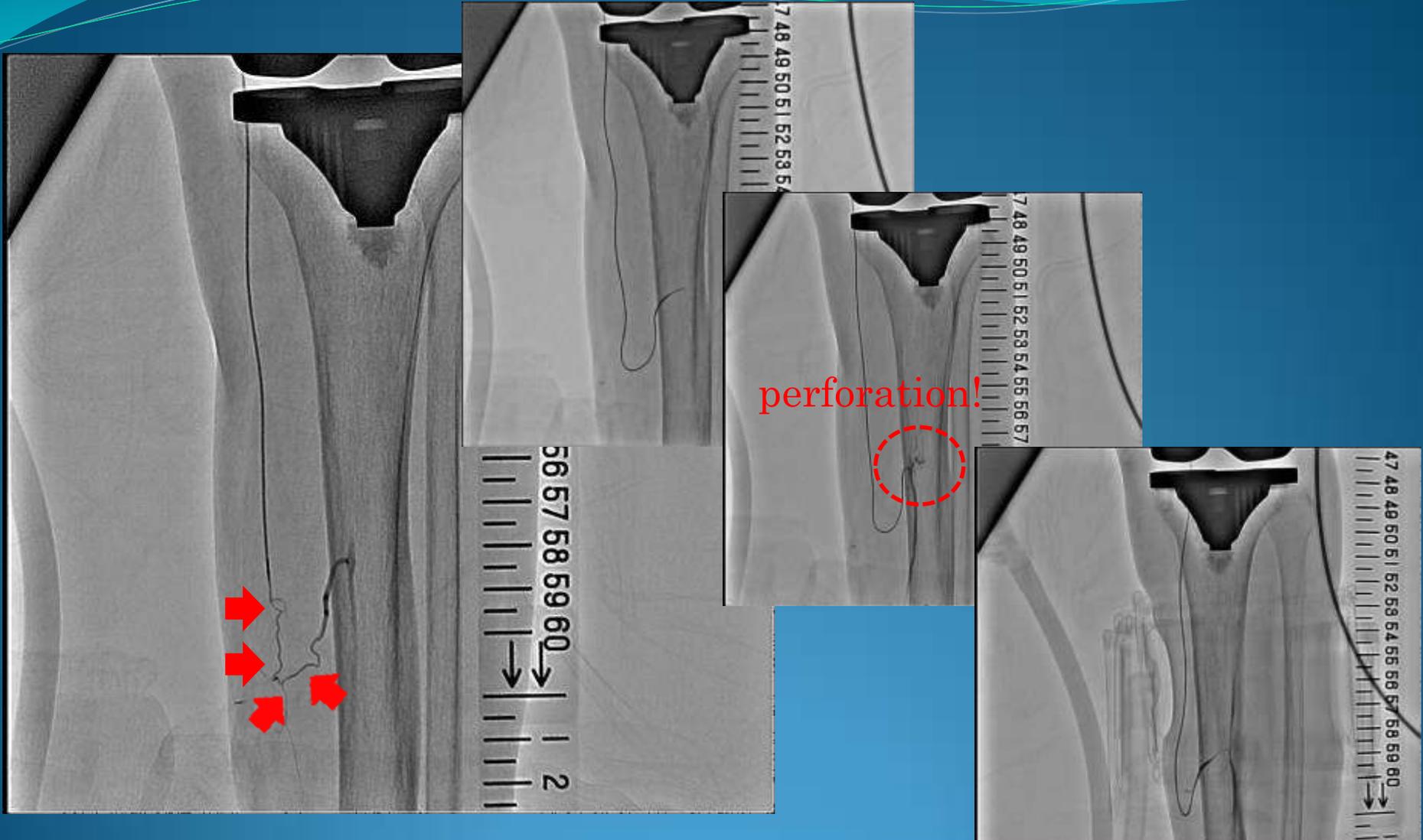
Trans-collateral angioplasty(TCA)
Cruise with Prominent

EVT(1t.SFA to POPA)



Trans-collateral angioplasty(TCA)
Cruise with Prominent

EVT(1t.SFA to POPA)



Trans-collateral angioplasty(TCA)
Cruise with Prominent

hemostasis by negative
pressure and compression

Believe in the force!



EVT(1t.SFA to POPA)



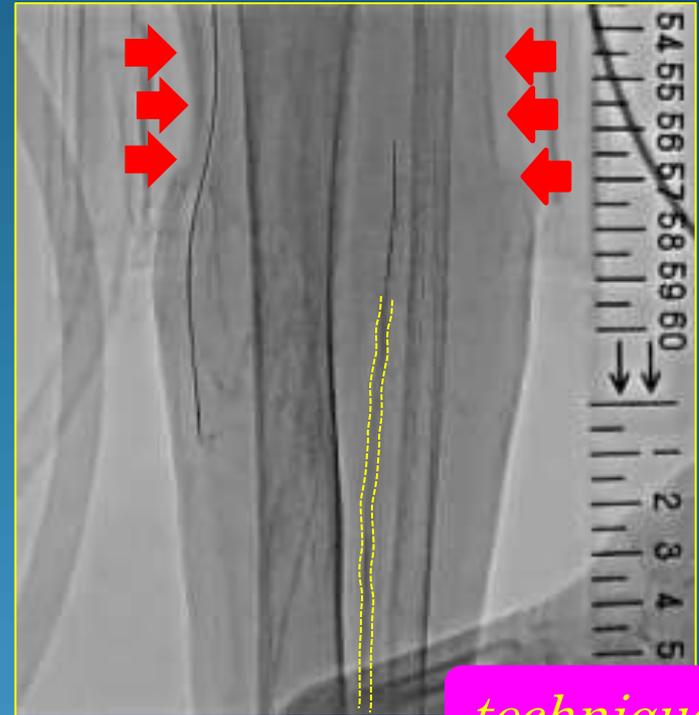
technique5

Then I performed distal puncture (ATA).

EVT(1t.SFA to POPA)



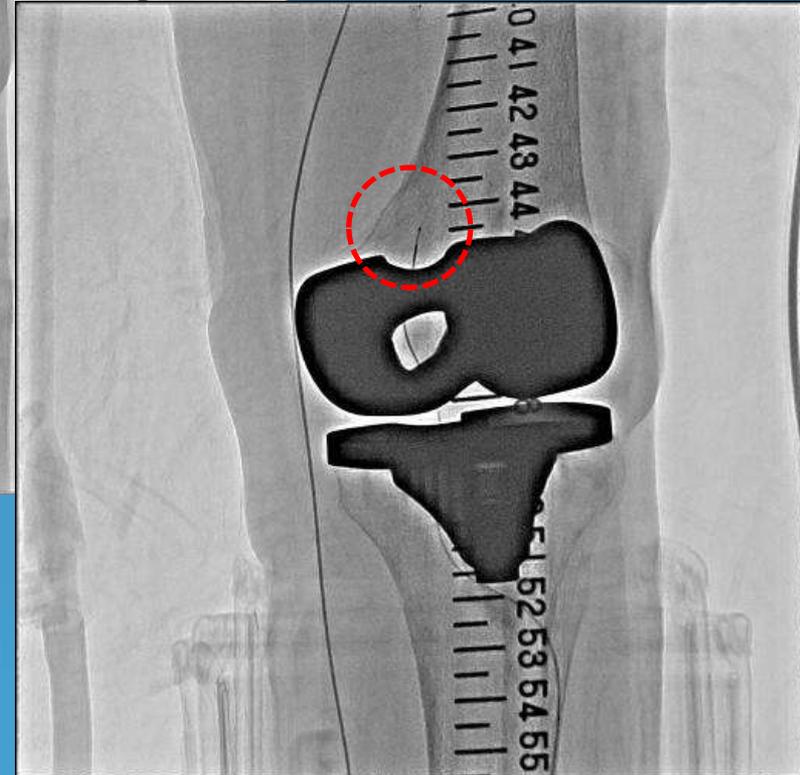
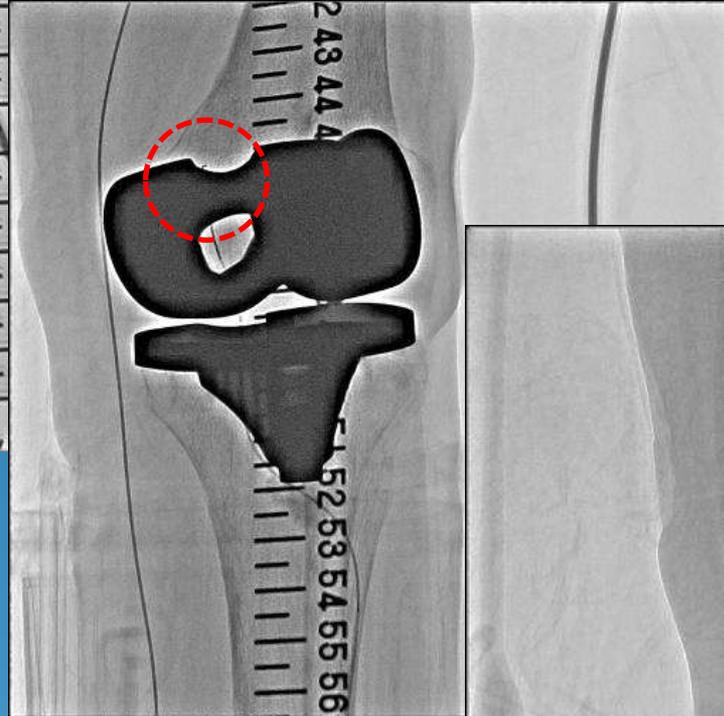
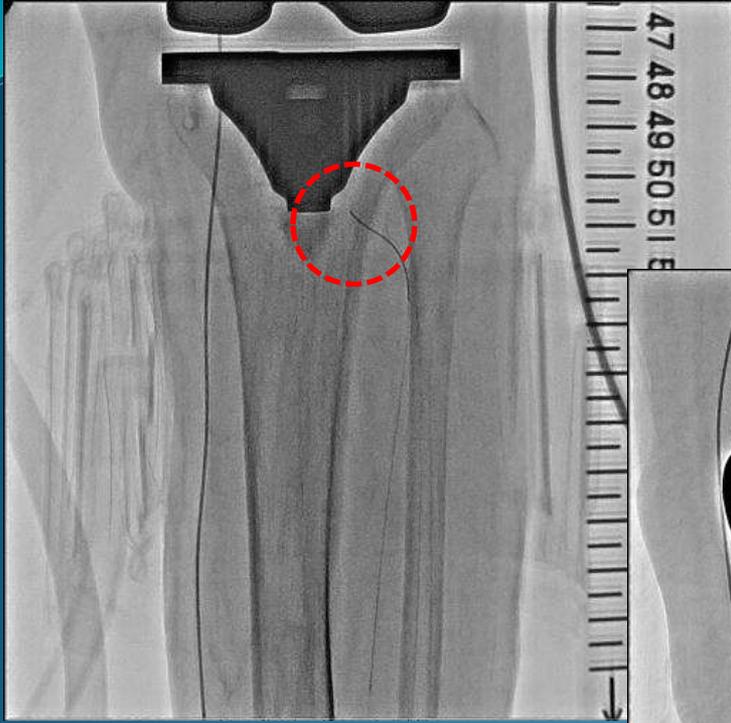
Insertion of a wire(Chevalier)



technique6

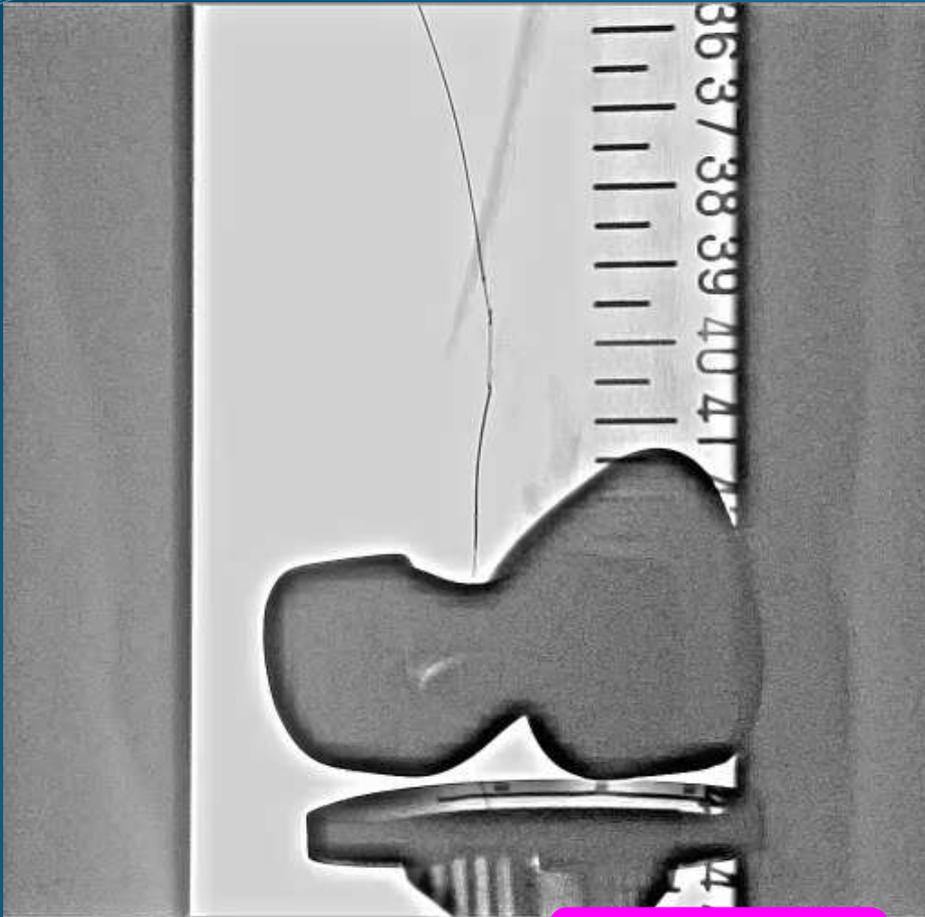
While I performed distal puncture, compression by tourniquet was done. This method could reduce amount of contrast and we could confirm the artery even if the patient moved his leg.

EVT(1t.SFA to POPA)



Chevalier with Prominent NEO II

EVT(1t.SFA to POPA)



technique7

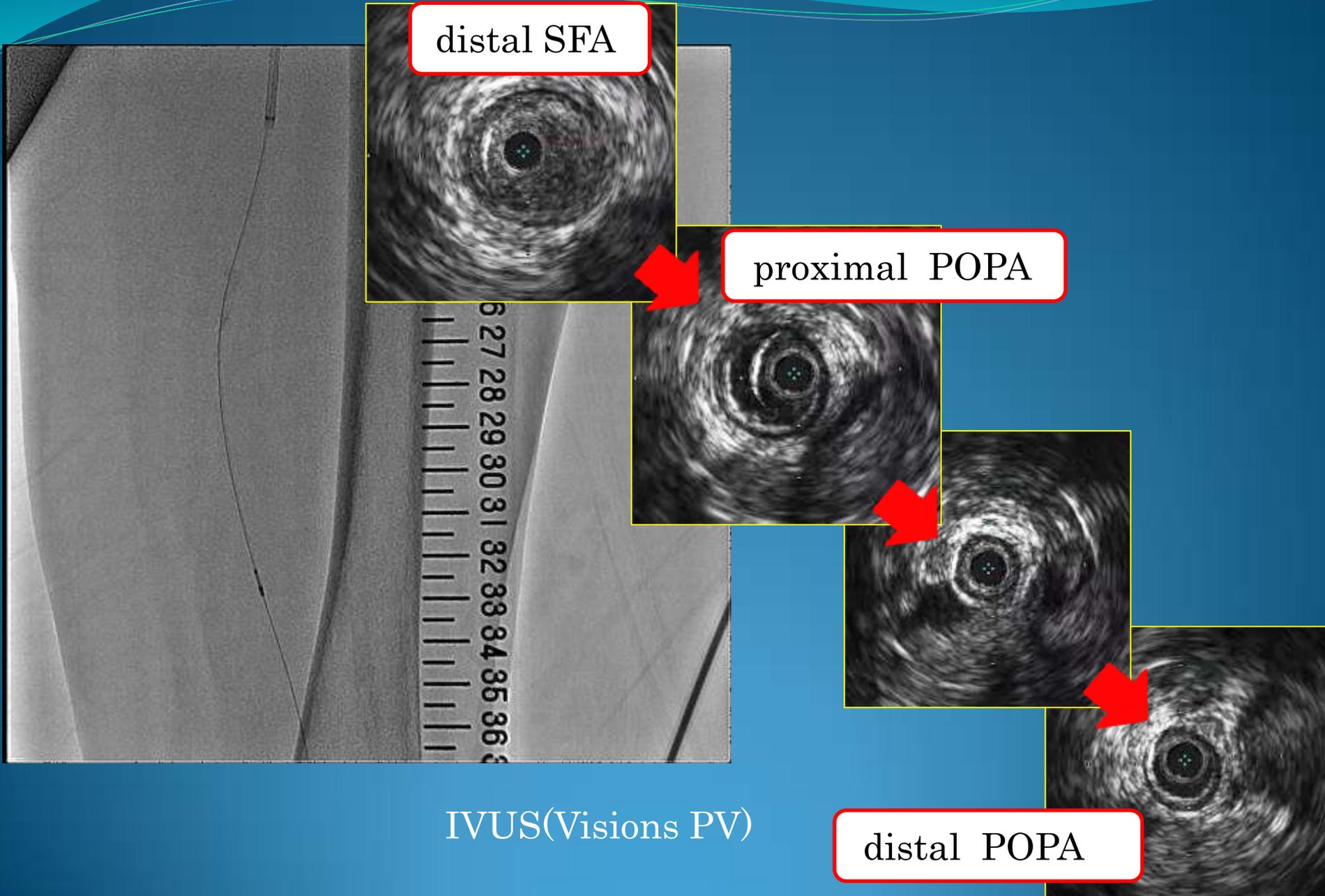
guide wire Rendez-vous

Astato XS9-12 → Prominent NEO II

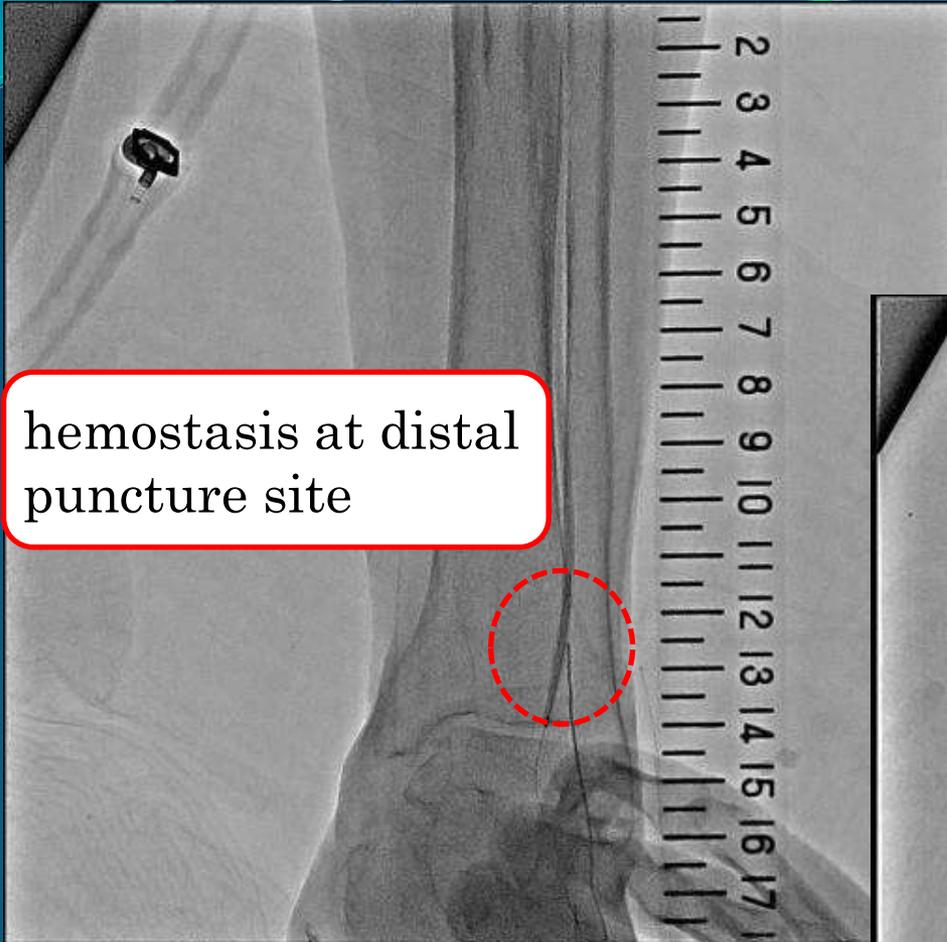


I advanced Cruise with Prominent
to dorsalis pedis artery.

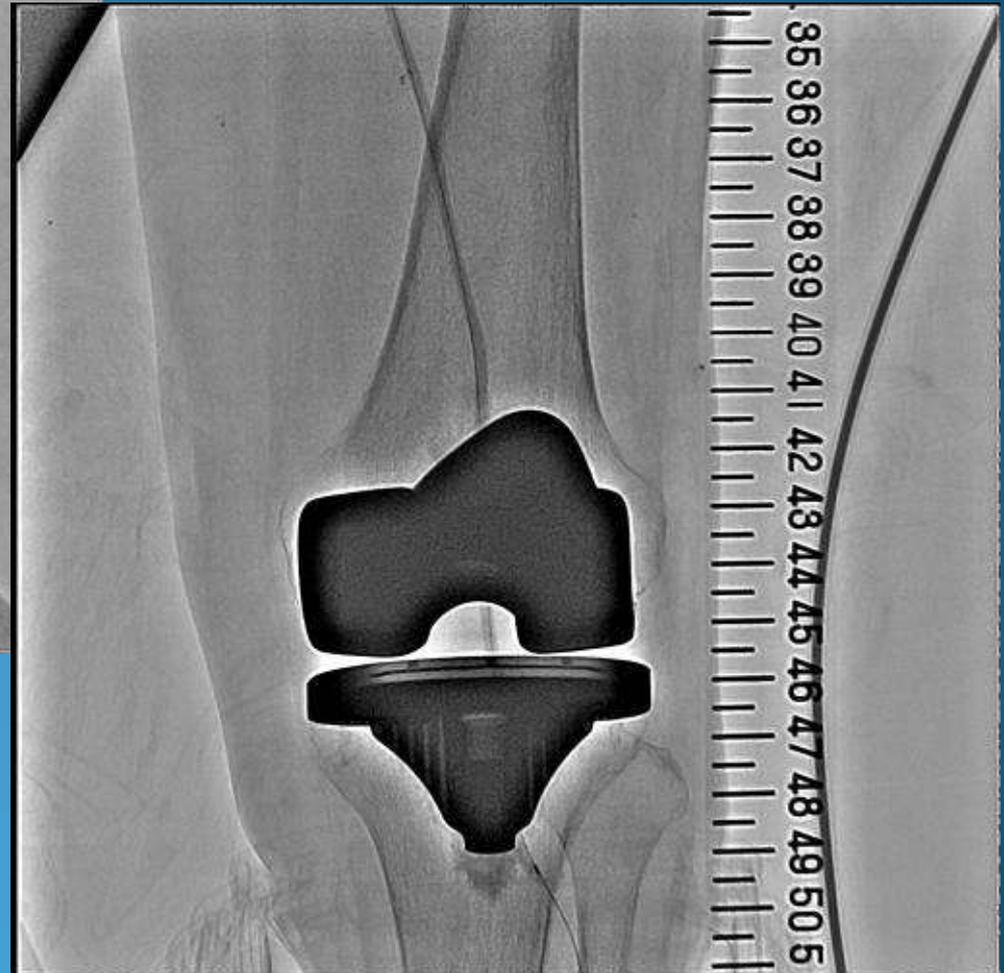
EVT(1t.SFA to POPA)



EVT(It.SFA to POBA)

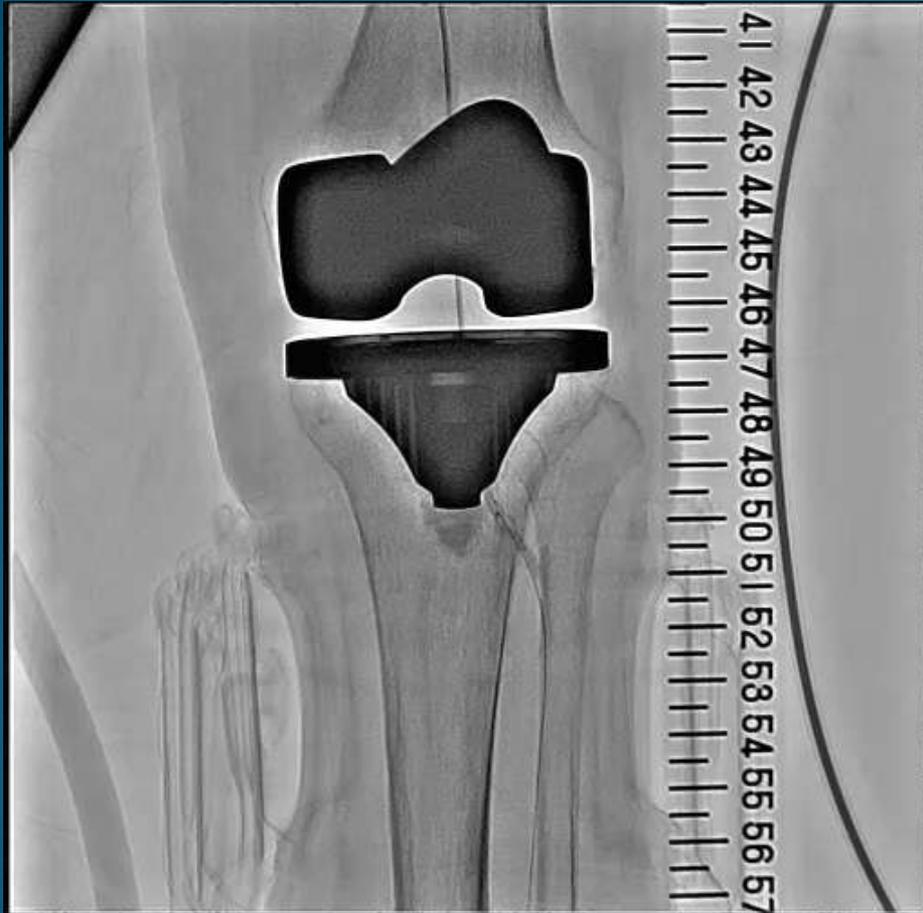


hemostasis at distal puncture site

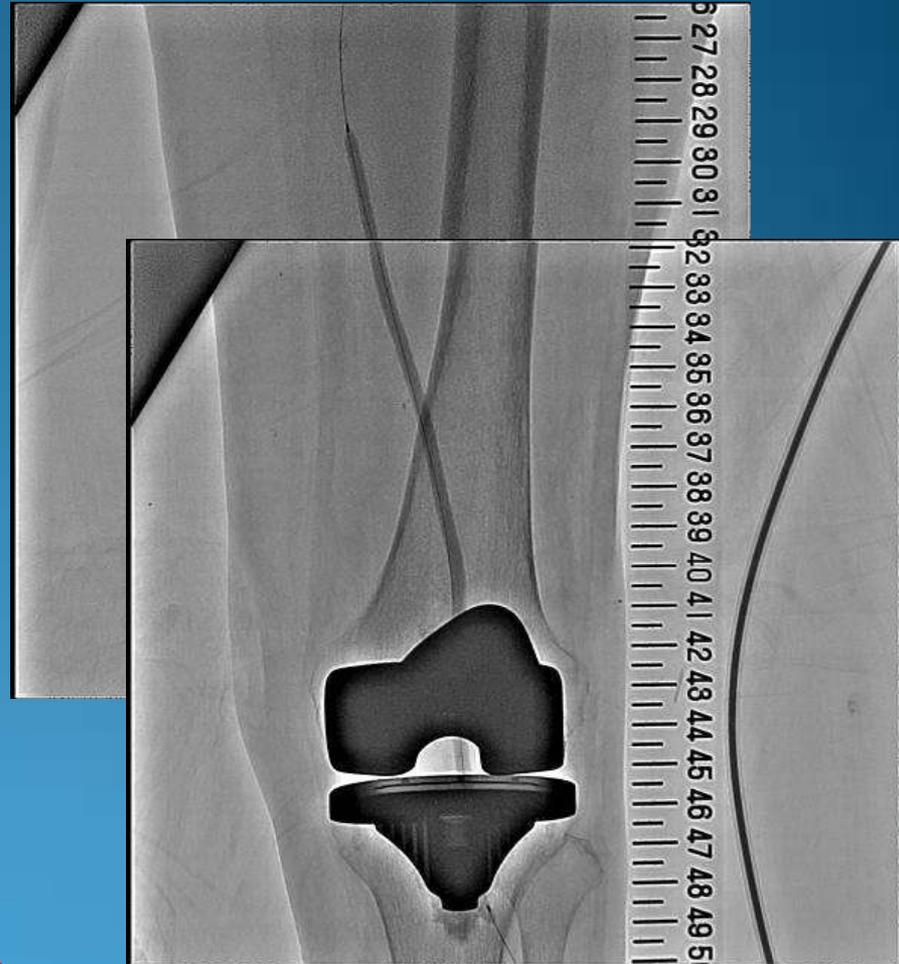


POBA:Coyote 2.5x220mm

EVT(1t.SFA to POBA)

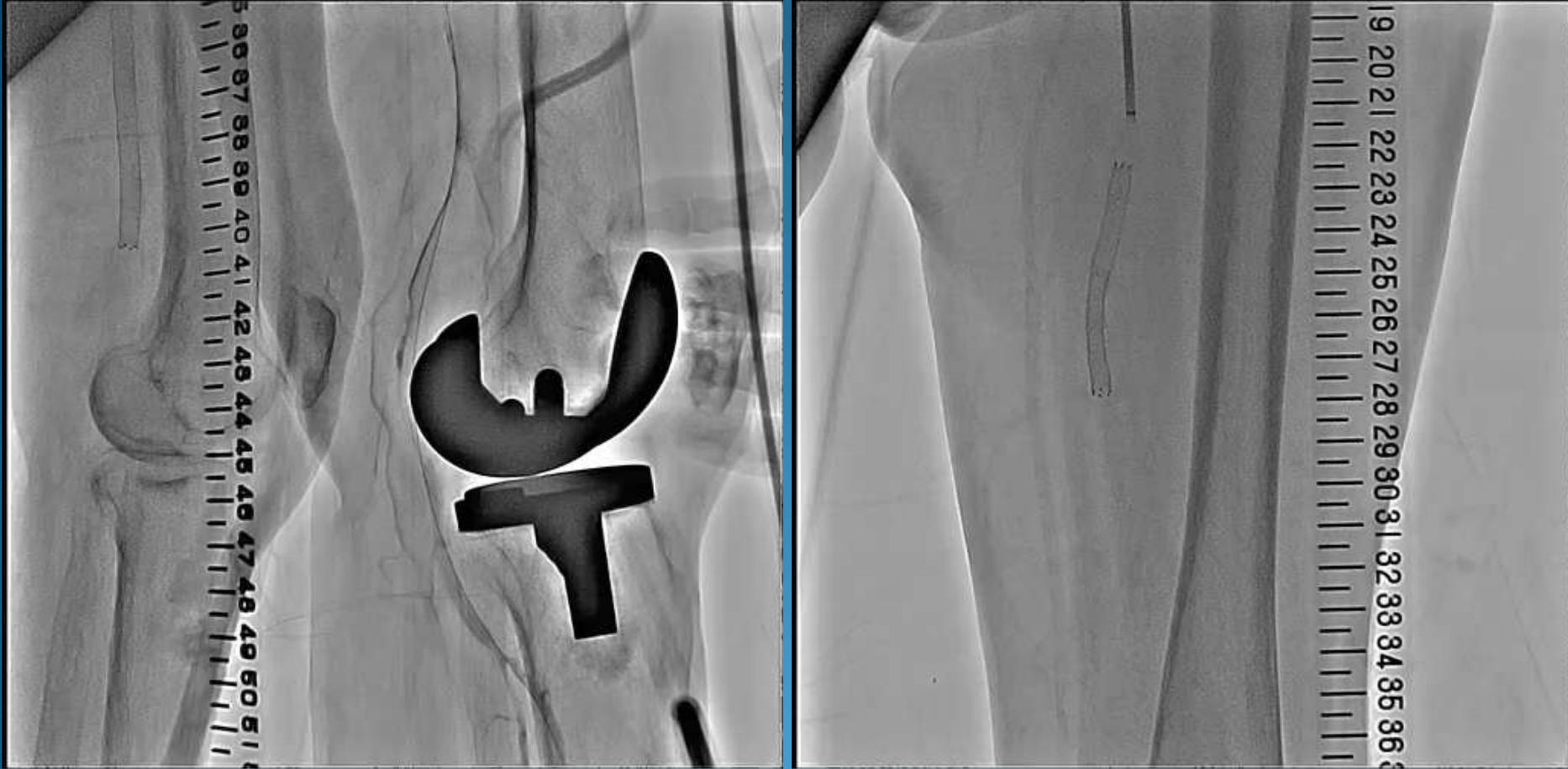


reverse angiography by aspiration
catheter



POBA:Coyote 4.0x220mm

EVT(lt.SFA to POPA)



final angiography

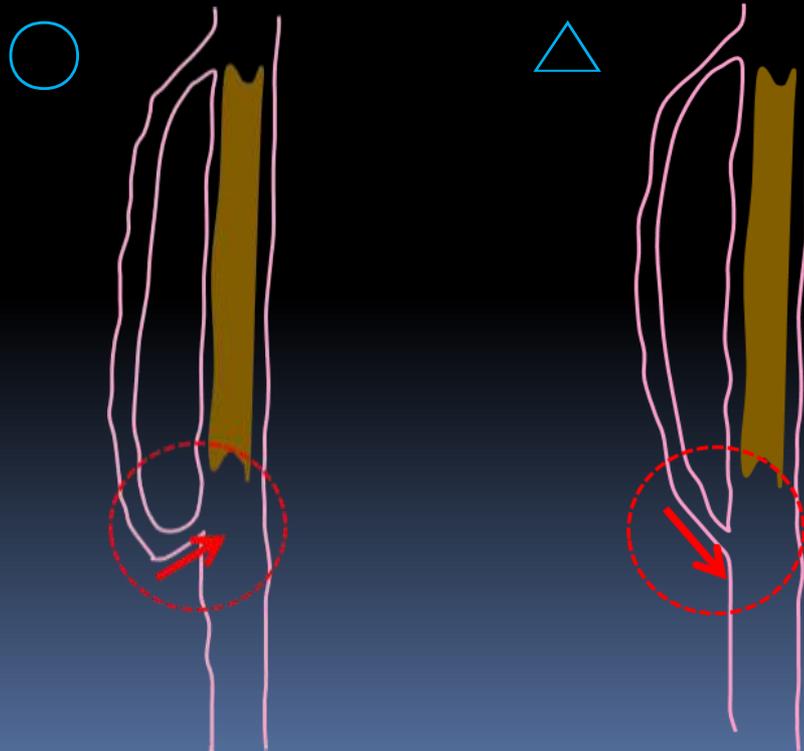
ABI rt.0.54,lt.0.55→ rt.1.17,lt.0.89

Consideration

Trans-collateral angioplasty(TCA)

1.channel selection

- 1) short channel
- 2) less tortuous channel
- 3) **desirable that approach angle to CTO isn't obtuse**
- 4) not too near to distal end of CTO

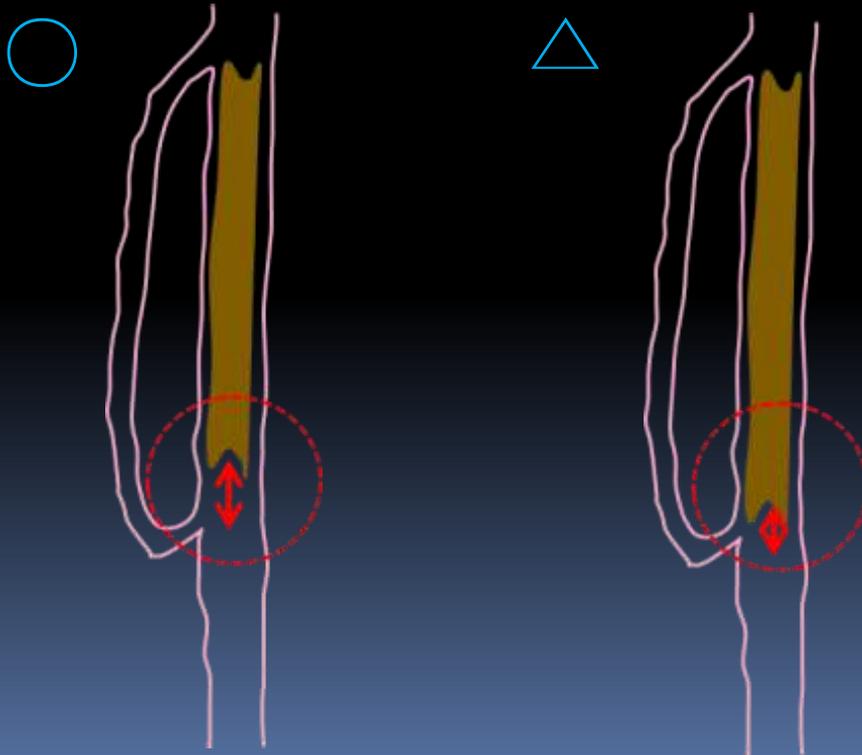


Consideration

Trans-collateral angioplasty(TCA)

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Consideration

Trans-collateral angioplasty(TCA)

1.channel selection

- 1) short channel
- 2) less tortuous channel
- 3) desirable that approach angle to CTO isn't obtuse
- 4) not too near to distal end of CTO

2.prepare clear road map

Re-create road map frequently

3.guidewire selection

Cruise

4.microcatheter selection

Prominent, Corsair

TCA requires ipsilateral approach reasonably because of wire maneuverability.

Consideration

Distal Puncture at ATA

1.puncture site

a straight segment of anterior tibial artery

2.device

20G metal needle(Medikit) or 22G needle

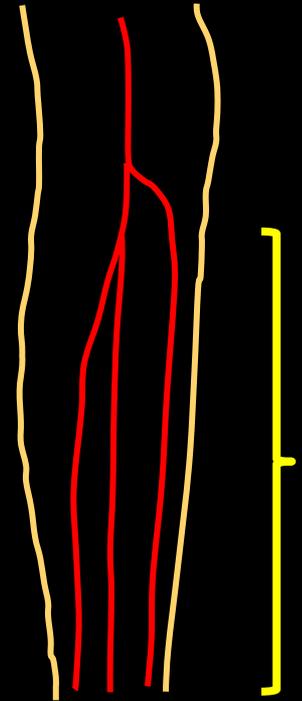
3.angulation of fluoroscopy

30° ~45° oblique on the same side of the leg

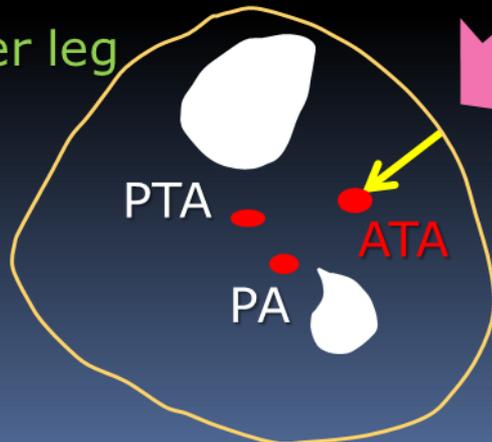
→the shortest distance from body surface

※ confirm the depth of a needle by AP view

lt.lower leg

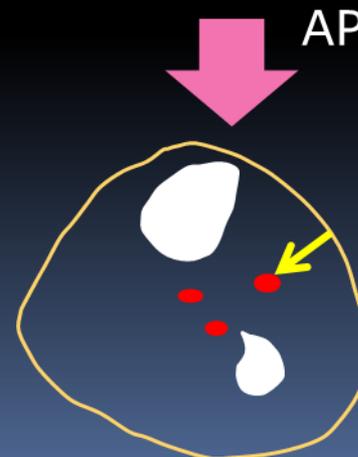


lt.lower leg



LAO45°

AP view



Thank you for your kind attention!

