The case of access site related complication of retrograde access by distal puncture

Masahiko Fujihara
Kishiwada Tokushukai Hospital,
Osaka, Japan
Disclosure

Speaker name:

*Mashiko Fujihara*

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
Background

• Recanalization of a chronic total occlusion (CTO) is still technically challenging

• Retrograde access with distal puncture is the effective technique in unsuccessful antegrade approach

• The common site of distal puncture include standard popliteal artery, distal superficial femoral artery (SFA) and tibial artery

• The drawbacks of classic popliteal artery puncture are prone position, vascular complication such as AV fistula, and disinfection due to postural change.

• One survey showed that many physicians favored distal SFA puncture for SFA CTO
Bidirectional Approach with Distal Puncture

Popliteal A  Distal SFA  Dorsal Pedis  Distal PTA
Q. Which distal puncture site do you prefer for SFA CTO?

From OBEN questionnaire survey for Japanese EVT physician (2016)
Our method of distal SFA puncture

Angiography Guidance Puncture

0.014 inch guidewire and micro catheter
Hemostasis of distal SFA puncture site

Balloon tamponade (long inflation) and stent implantation
A Case of SFA chronic total occlusion

- 70 years old Male
- Rutherford 3 claudication
  - HTN, Diabetes, Dyslipidemia
  - Current Smoker
  - Atrial Fibrillation
  - History of PCI
- Medication
  Aspirin/Clopidogrel/Apixaban
- Lesion
  - Occlusion length: 187.6mm
  - No calcification
  - 3 BTK vessels run-off
70 y/o Male, SFA CTO right

Unsuccessful Antegrade Access

Bidirectional Approach with Distal SFA Puncture (0.014inch guidewire +micro catheter)

Successfully Retrograde access and nitinol stent Implantation

Balloon tamponade 5mm x 5minuts x2times

Final angiography confirm hemostasis
One day post procedure
One day post procedure: Angiography

Active Bleeding at the distal SFA puncture point

Balloon tamponade with balloon 15minx 2times

Final angiography confirm hemostasis
On the 3rd day after procedure

Active Bleeding at the same point

Covered stent implantation
Fluency 8mmx60mm

Final angiography confirm hemostasis
This complication is rare or not?

Successfully recanalization by distal puncture and balloon tamponade

Active Bleeding at the distal SFA puncture point

Covered stent implantation

By Special courtesy of Eijiro Hayashi, Shin-kawabashi Hospital
Summary

• Bidirectional approach with distal puncture gives higher success rate for recanalization of long SFA CTO
• Distal SFA puncture is more practical compared to popliteal approach in regards to patient’s position
• In about safety issue of distal puncture, there were no prospective data
• Tibiopedal access had shown the safety and efficiently for the crossing of infra-inguinal lesions in prospective multicenter study(1)
• Large scale prospective study is needed to clarify safety and efficacy on distal SFA puncture