How did DCB change my treatment principle in femoral-popliteal lesions

Bao Liu
Dept. of Vascular Surgery,
Peking Union Medical College Hospital, Beijing, China
Disclosure

Speaker name:
Bao Liu

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

The evolution of endovascular treatment since 1980

POBA: plain old balloon angioplasty
BMS: bare metal stent
DES: drug-eluting stent
DCB: drug-coated balloon

Problems after stenting

- stent fracture
- in-stent thrombosis
- in-stent restenosis
The era of DCB

Advantages of DCB

1. Uniform distribution of drugs towards vascular wall
2. Immediate releasing of drugs
3. No foreign body left inside vessels
4. Reducing anti-platelet cycle
A total of 122 lesions with average length:
- DCB, 7.6cm; PTA, 7.8cm

12 m follow-up:
- DCB with/without stenting is better than PTA in 12 mons patenty.
- Patency for DCB with stenting was slightly better than DCB alone.
DCB advantage over PTA in Chinese study

AcoArt I Study Primary Endpoint at 6 month

Overall
- PTA: 1.15 mm
- DCB: 1.69 mm

Long Lesion group
- PTA: 1.35 mm
- DCB: 27.8 mm

ISR Group
- PTA: 0.05 mm
- DCB: 0.23 mm

DCB advantage over PTA in Chinese study
So far DCB can be used in...

- Short Lesion
- Long Lesion
- Calcified Lesion
- ISR
- And ... ...
Case 1: DCB in short lesion

Pre-DCB | DCB | Post-DCB | 6m follow-up
Case 2: DCB in long lesion

stenosis and occlusion in femoropopliteal artery

residual stenosis after DCB

angiograph after high pressure balloon
Case 3: DCB in ISR

SFA-ISR  After DCB  Good outflow
Case 4: DCB with stent

Pre-dilatation

Dissection after dilatation

Post-stenting
Case 5: DCB in anastomotic area restenosis

- Occlusion in femoropopliteal graft bypass after 3 years
- Recanalization with BMS in distal anastomosis 6 months ago
- Restenosis in distal anastomosis
Case 5: DCB in anastomotic area restenosis

- Thrombus aspiration (PMT)
- In-stent stenosis
- DCBing
- Patency acquired
Case 5: DCB in anastomotic area restenosis

4 months follow-up
The graft patented.
Case 6: DCB in preventing stent edge restenosis

SFA with long lesion

2-120mm predilation

DCB after stenting over edge
Case 6: DCB in preventing stent edge restenosis

DEBAS STUDY Device Rationale

- Thinner struts decreases distance between DCB coating and vessel wall
- Low metal to artery ratio
- Thin struts may have a ‘scoring effect’ on vessel wall when DCB is inflated within stent - potentially reducing barotrauma
Case 6: DCB in preventing stent edge restenosis

- PP = 88.2%
- SP = 96.1%
- Assisted PP = 88.2%
- Better than DES
Summary

1. DCB has been demonstrated to be efficient by multi global studies.

2. Chinese DCB era has arrived, traditional therapy for vascular in PAD should be updated.

3. Utilization of DCB can be extend to more complicated cases, but need to be proven.
Thank you for your attention

Happy Chinese New Year!
How did DCB change my treatment principle in femoral-popliteal lesions

Bao Liu
Dept. of Vascular Surgery, Peking Union Medical College Hospital, Beijing, China
How did DCB change my treatment principle in femoral-popliteal lesions

Bao Liu
Dept. of Vascular Surgery,
Peking Union Medical College Hospital, Beijing, China