Challenging case

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Disclosure

Speaker name:
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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
49-year-old man

• S/P Left below knee amputation 1 year ago due to unreconstructable arterial insufficiency
• Pathology confirmed diagnosis of Buerger’s disease
• Now well walking with left leg prosthesis
History

• 2 months ago, he developed right 1st and 3rd toe gangrene with severe ischemic rest pain
• S/P right 1st toe amputation
• 2 weeks ago, gangrene progressed to other toes and forefoot area
Non-invasive test

Right ABI 0.45 with monophasic waveform

Rt. toe pressure 1 mmHg
Angiography

- long total occlusion of right SFA, PA and all tibial vessels
- Multiple collateral vessels
- can’t identify distal runoff
Color doppler U/S

- Patent segment of dorsalis pedis artery 3 cm
  - size 2 mm
  - monophasic spectral wave form
- No patent segment of SFA, PA and all tibial vessels
PROCEDURE
Planing

- Crossover access
- Try antegrade wire passing
- If failed → retrograde puncture
- Snare wire
- POBA +- Stenting
Crossover access from left CFA

- Can’t identify orifice of right SFA
- Try subintimal wire passage to right SFA
- Failed to find true lumen
U/S guided retrograde puncture right DPA
U/S guided retrograde puncture right DPA

- 0.018” V-18 wire
- Quickcross catheter
- angiography to confirm intraluminal passage
Snare guidewire in subintimal plane

- Subintimal wire passage from ATA upto SFA
- Use 4Fr catheter for snare retrograde wire
BTK angioplasty
After DES at ATA
BTA angiography

We failed to open plantar arch but it’s had good collateral flow to foot
Postoperative period

• Right DPA was palpated
• Management
  – Right Transmetatarsal amputation
  – Wound care with hydrofiber dressing
  – Dual antiplatelet therapy

postoperative ABI  1.13
CT angiography

- At 2 months after procedure
  - Patent right SFA, PA stent
  - Patent right ATA, proximal DPA with good collateral vessel in right foot stump
Last F/U

- At 5 months after procedure
- Right midfoot stump was healed
- Patient can ambulated with prosthesis and walker
Conclusion

• Even in Buerger’s disease patients, aggressive endovascular treatment is still feasible
• Ultrasound is the useful tools for identify distal runoff and target for retrograde puncture
THANK YOU
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