CLI Therapies - LINCed
Tailored strategies on revascularisation and wound management

LimFlow procedure for no-option CLI

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Disclosure

Speaker name:

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I have the following potential conflicts of interest to report:

☐ Consulting (Vascular Insight, LimFlow)

☒ Employment in industry

☐ Stockholder of a healthcare company

☐ Owner of a healthcare company

☐ Other(s)

☐ I do not have any potential conflict of interest
No-option CLI

Clinical presentation
- Advanced age, multiple comorbidities
- Multiple prior interventions/bypass surgeries
- Poor venous conduits

Angiography
- small artery disease (SAD)
- “desert” foot
- Severe calcification/recoil
- Rapid restenosis after previous intervention

Venous arterialisation
Concept of venous arterialisation

- Av-fistula
- Valves
- Side branches
The pDVA quick overview (LimFlow)

System Components

- **Artery to Vein Crossing**
  - Facilitates quick, reproducible and safe crossing

- **Rendering of Valves Incompetent**
  - Designed to improve outflow by atraumatically cutting distal valves

- **Endoluminal AVF Creation**
  - Tapered and Straight Covered Stents with Low Thrombogenicity

**Ultrasound AV Positioning Kit**

**Push Valvulotome**

**Covered Stents**
Case 1

28 year, male

- Chronic kidney disfunction (obstructive uropathy)
- Hypertension

Several BTK interventions

Ischemic pain right leg, gangreen, rutherford 5
WIfI: W1 I3 fI0
LimFlow procedure

FROM A PREVIOUS CASE

EXPOSITION

Tourniquet

7 FRENCH SHEET

5 FRENCH SHEET
ARTERIAL CATHETER (needle, MONORAIL .014)

VENOUS CATHETER (ultrasound, OTW .014)

Crossover Point
CONTRAST TO DISTEND AND VISUALIZE VEIN

DOUBLE WALL PUNCTURE

WIRE SNARED INTO SHEATH

7F Arterial Catheter

5F Venous Catheter

5F Venous Catheter withdrawn after alignment

Catheters Aligned by Ultrasound
4F “Forward Cutting” valvulotome to lyse the valves

Crossing the valves and wiring the arch
Completion angiogram
The procedure is a big step in the process of limb salvage

The key to success is in the aftercare
Principles of venous arterialisation

• Venous arterialisation: 4-6 weeks to develop
• It is a dynamic process, which has to be monitored
  – Collateral, stenosis
• Woundcare differs
• Infection: staged amputation
Post procedure care

- Anticoagulation: double regime
- Antibiotics (24 hours)
- Control with doppler or stethoscope (shunt)
- Duplex ultrasound
  - Volumeflow 200-400 ml/min

- Swelling (2-3 weeks): elevate first 24h
- Pain sensation changes
  (ischemic/venous pressure)
Case 1

4 weeks
- developed burning pain
- progression of necrosis
- Low TcpO2
Re-intervention

- Leakage top stent
- Steal side branch
- Extension stent and coiled side branch
Case 1

8 weeks Necrosis wound edges

6 weeks Forefoot amputation
Split Skin Graft

3 months

4 months

5 months
65 year, male

Diabetes

Rutherford 5 right foot

(4x POBA of the ATP)

small artery disease
CASE 2

4 weeks: pain
Duplex: good volume flow, but low TcPO2

2 weeks

4 weeks

Duplex good

11mmHg

600 ml/min
Flow to the collaterals/gsv

CASE 2

ligated the GSV
Amputation 6 weeks after limflow procedure

CASE 2

6 weeks

7 weeks

Infection
CASE 2

Infection: antibiotics and staged amputation forefoot; drainage infection (bonecaps intact)
CASE 2

Woundcare

- Open wound: gel (moist)
- No tight bandages

9 weeks after limFlow procedure
CASE 2

Necrosectomy + versajet
CASE 2

VAC therapy; intermittent, low pressure (vein vacuum)
Conclusion

- The Limflow procedure is a big step in the treatment of no-option CLI patients.
- The venous arterialisation needs 6 weeks to develop and it's a dynamic process.
Thank you for your attention

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