Endovascular treatment of venous leg ulcerations

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Disclosure

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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)

X I do not have any potential conflict of interest
Pathology of Venous Leg Ulcers
Macro-Circulation

Pathology of Venous Leg Ulcers

Micro-Circulation

QoL in VLU

Meta-Analysis of Health-related QoL in VLU

• Pain is most significant factor affecting HRQoL (61-80%)
  - Difficult to establish effective pain treatments
  - Limited mobility
  - Sleep disorders
• Loss of employment
• Current regimens experienced as ‘hopeless treatment’
• Greater impact on younger people (<65yrs)
• VLU-pts had lower scores in every HRQoL domain of SF-36

Gonza´lez-Consuegra RV, Verdu J. J Adv Nurs 2011
Economic Impact of treating VLU’s

Study period: 12 Mo – Median FU: 6Mo

84 pts with Venous Leg Ulcers

Best-Medical Therapy for VLU $15,732 € 9569*

50 patients (60%) healed without recurrence $10,563

17 patients (20%) failed to heal $33,907

17 patients (20%) VLU-recurrence $12,760

Hospital-admission (60% infections) $33,629

Exclusion of reflux (surgery, ablation) $12,304

- significantly reduced recurrence rates 5% vs 34%

Treatment for outflow obstruction $24,241

→ 1% to 3% of health care budget in Western Countries

→ 3 billion USD per year spent on treatment of VLUs

Interventional Therapeutic Options

Primary (simple) Venous Insufficiency

- Endovenous Ablation (heat, MOCA, foam, glue)

Secondary (thrombotic) Venous Insufficiency

- Venous Recanalisation, Venoplasty & Stenting
EndoVenous Laser Ablation
Endovenous Ablation for treatment of VLU

→ Insufficient superficial and perforator veins

Follow-up 1 year (110 patients C6, 140 EVLAs)

• Technical closure rate 100%
• Healing rate 76%
• Freedom of VLU recurrence 95.2%

→ Extrapolation from vein surgery data

AVF/SVS/ACP/UIP Guidelines 2014

Primary Venous Insufficiency

Recommendations for ablation of incompetent superficial veins & perforators without reflux in deep system

C6 – ulcer healing & prevention of recurrence – 2C
C5 – prevention of VLU-occurrence – 1C
C4b – prevention of VLU-occurrence – 1C

O´Donnell TF et al. JVS 2014
Ilio-caval
Recanalisation, Venoplasty & Stenting

Recanalisation Prof. Kucher, Bern
Ilio-caval Venoplasty & Stenting of chronic venous obstruction

- Patency rates (4-5yrs)
  - Cumulative primary 57-93%
  - Assisted-primary 92%
  - Secondary patency 93-100%

- Improvement of symptoms
  - Pain 80%
  - Swelling 55%

- Ulcer-healing rates 50-70%

- Freedom of VLU-recurrence
  - 62-88% within 2years

Secondary Venous Insufficiency

Recommendation for endovascular repair in inferior vena cava or iliac vein chronic total venous occlusion/severe stenosis with/without deep reflux

C4b – prevention of occurrence – 1C
C5 – prevention of recurrence – 1C
C6 – ulcer healing & prevention of recurrence – 1C

O´Donnell TF et al. JVS 2014
CONCLUSION

• VLUs are caused by venous hypertension, consecutive leakage and rarefication at the capillary level

• VLUs pose a significant problem on QoL and costs

• Endovenous ablation of truncal veins in primary insufficiency improves healing and recurrence rates of VLUs

• Ilio-caval venoplasty & stenting in secondary insufficiency improves healing and recurrence rates of VLUs