Angiosomes Of The Foot Have Tremendous Variability As Indicated By Laser-Assisted Indocyanine Green Imaging Using The SPY SYSTEM

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No disclosures

We do not support the Angiosome concept

The angiosome concept evaluated on the base of micro-perfusion in CLI patients - an O2C guided study
Rother U, Kapust J, Lang W, Horch RE, Gefeller, O, Meyer A
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Intraoperative fluorescence angiography
Fluorescence dye: indocyanin green
Absorption peak at 800-810 nm
Eliminated by hepato-biliary system
Adverse reactions: 4:240,000
(allergic diathesis and iodine allergy)

Intraoperative fluorescence angiography
Quantification on a gray scale basis
Brightest stats (BRS) – first mode
Background stats (BAS) – second mode
Measurements

- **Intensity**
  - Differences of gray scale (Ingress)
  - $I_{\text{max}} - I_{\text{min}} = \text{Ingress (AU)}$

- **Dynamics**
  - Increase of the fluorescence intensity (Ingressrate InR)
  - $\Delta I/\Delta t = \text{Ingressrate (AU/s)}$

Intraoperative measurements

18 patients
Tibial bypass

Measurements

Pre-/post bypass: dorsum
Pre-/post bypass: plantar

**Results**

Significant improvement of microcirculation

BRS: significant increase in IN (P=0.003) and InR (P=0.004)

BAS: significant improvement in IN (P=0.047) and InR (P=0.008)

Not only in the direct angiosome
Conclusions

Two different measurements – same result:

- **O2C**
  - demonstrating oxygen saturation
  - demonstrating regional perfusion

- **ICG angiography**
  - demonstrating microperfusion

No evidence to support the Angiosome concept