IVUS for Guiding

Endovascular Therapy

in Deep Veins

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Disclosure

Speaker name:

I have the following potential conflicts of interest to report:

- Consulting: Cook medical; Optimed GmbH; Bard; Volcano/Philips; Straub; Bentley; Vesper Medical;

- Employment in industry

- Stockholder of a healthcare company

- Owner of a healthcare company

- Other(s)

- I do not have any potential conflict of interest
Relax. He always just warms up with the big, heavy, weighted scalpel.
IVUS mainly used to...

- Determine significant Stenosis
  - >50% lumen reduction
- Determine stent landing zone
  - Healthy segment
- Evaluate after stenting
  - Residual stenosis/compression
  - Thrombus
- Evaluate after thrombectomy
  - Residual thrombosis
Limitations of IVUS

• No value during guidewire recanalization

• No validated flow measurements

• Stent positioning on anatomical landmarks alone
  • Slight patient movements
  • Distal positioning is delicate
Benefits of IVUS

- Subtle but significant pathology can be detected
  - Even more than MR-venography
- Instant & accurate 3D representation
  - Repeatedly
- Radiation reduction
  - Different angulations not necessary
  - More efficient imaging
- Contrast reduction
  - Less runs
Where’s the Data?

“High clinical yield of IVUS as sole diagnostic modality in DVO”
*Saleem et al J Vasc Surg Venous Lymphat Disord. 2019 Dec*

IVUS is an effective option to reduce radiation during DVO interventions
*M. Lichtenberg, Data from The Arnsberg Registry*
When and how to use in practice?

Not „always and solely“ – not „never“

• Principally, have it present in all cases
  • Never know what’s going to happen

• Always use it when in doubt
  • Suboptimal or non-available cross-sectional imaging

• When the common femoral vein is involved

• In DVT treatment

• During re-interventions for in-stent stenosis or thrombosis
• IVUS obviously has significant value guiding venous interventions

• When and where it is used should merely depend on patient’s best interests
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