Stenting in peripheral arteries: Consideration for lesion specific device use

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Types of Stents 1/3

- Ballon-expandable Stent
- Strong, hard to compress
- Self-expanding Stent
- Softer, but more flexible
Types of Stents 2/3

- Covered Stent
- Balloon-expandable

- Covered Stent
- self-expanding
Types of Stents 3/3

- Drug eluting Stent
- Self-expanding

- Drug eluting Stent
- Balloon-expandable
- (coronary Stents)
Considerations for Stent-Choice

- Consideration of the lesion-type
- Soft or calcified
- Thrombus containing
- Diseased region?
Aorto iliaca territory

- Occlusion of the common and external iliaca artery
- Often heavily calcified
  - BES (high radial force)
  - Covered BES (danger of rupture)
- Bifurcational disease
  - BES, precise to implant
External iliac artery: long lesion $\rightarrow$ selfexpanding stent
Femoropopliteal artery Disease
Bending, twisting, axial compression and extension during movement
Risk of stent-compression in superficial arteries

Balloon-expandable Stent

Self-expanding Stent
More Problems of the Femoral-popliteal territory

Standard nitinol-stents
Different Selfexpanding Nitinol-Stents

- woven from single nitinol-wires
- very flexible
- Resistance to compression

Standard nitinol-stent:
Cut by laser out of a nitinol-tube
Woven Supera Stent

Greater than 4x compression resistance

Supera® 5.5 mm
Supera® 6.5 mm

Standard Nitinol Stents 6.0 x 100 mm
Supera Stent for a calcified SFA-Lesions
Supera Stent for a calcified SFA-Lesions
More Problems for stents in the SFA: High Restenosis-Rate

- Four re-occlusions within 1.5 years
- Normal Nitinol Stent implanted
Drug-Eluting Stents for the SFA

- Self-expandable Nitinol stent
- Coated with Paclitaxel

- Zilver-PTX
- Eluvia-stent
- Better patency

Same patient treated once again with Zilver-PTX-stents, 32 months later
Arteries below the knee

- Often long lesions
- Small arteries
- Poor outflow

- Stenting is infrequent
Which are good cases BTK for stents?

- Short lesions
- Short calcified lesions
- Short balloon-expandable,
- drug eluting Stent
Large variety of stent-types and many different solutions possible
Thank you for your attention
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