How to Use Optimally The Supera Interwoven Stent: How Important Is It to Achieving Good Outcomes

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Disclosures
- Symposium Honoraria and Course Proctor
  - Abbott, Medtronic, TriVascular/Endologix
- Symposium Honoraria
  - Spectranetics, Cardinal, Bard, Boston Scientific, CSI, Gore, Medtronic
- National PI
  - CANOPY, SAPPHIRE WW, PREVEIL, CONFIRM, CONFIDENCE
- Stock, Research Grants, etc- NONE
- VIVA Board Member

Supera is a UNIQUE Stent: Markedly Different from Other Stents

Available Nitinol Stents are “Slotted-Tube”
- Laser cut from nitinol tubes
- Open cell Design/ geometry

Supera is an Interwoven Nitinol Stent
- The design incorporates 6 pairs of super-elastic nitinol wires which are interwoven in a helical pattern with a closed cell geometry

Supera Interwoven Stent

“Vascular-mimetic”
- High radial strength (>4X STNS);
- Compression resistance
- Physiologically flexible/conformable
- Kink and crush resistant
- Fracture proof
- Lowest chronic outward force exerted

Supera® Has the Least Chronic Outward Force

Clinical Advantages of Interwoven Stents (>STNS)
- Flexion points (CFA, popliteal, adductor)
- Calcified lesions
- Long lesions
- Better durability and conformability
- Better “stand alone” results
- Much better IVUS and “bent knee angiographic” results
Supera: Unique Stent, Unique Deployment

- Ratchet delivery vs. pin/pull or wheel
- Stent length is NOT exact (depends on UI)
- Supera is NOT oversized (1:1 OD: RLD)
- Must aggressively pre-treat all segments that will be stented with Supera
- Slower deployment, 2 handed, “an art”
- Great stent, but ~↑ potential for trouble with improper deployment technique

Different Stent, Different Deployment: 3 Keys to Proper Deployment

- Documented, aggressive pre-treatment ≥1:1 to OD of all vessel segments to be covered by stent
- 1:1 sizing of OD of stent to (pre-treated) vessel
- DEPLOY SLOWLY on high mag

Pretreatment

- Pre-treat to OD of stent (aggressive ≥1:1)
- Pre-treat ALL lesions to be covered by Supera; make sure balloon fully expands
- Consider PTA on Roadmap for sizing
- I like focal force (0.018, low dissection, etc)

Stent Deployment

**AFTER complete pre-treatment**

- Roadmap for distal stent position
- Once started, **MAG UP** and **GO SLOWLY**
- Right hand “throws” w/ ratchet, Left hand “babysits” and adjusts
- If stent elongates, **slow down** and apply forward pressure, if packed, **slow down** and apply back pressure
- If issues w/ first stent deployment, post dilate stent AND consider more aggressive pre-treatment before placing next stent

Illustrative Case: Calcified Adductor Canal Lesions

Focal Force PTA SFA and Pop

6mm @ 14 atm, with dEPD
Immediate results w/o post dilatation

Deploying Supera AFTER Vessel Prep

“Vascular Mimetic”

ITT Primary Patency @ 1 year (KM): 86.3%
No Fractures; No Safety Issues

What about Durability??

Other Supera Tips/Reminders

- Pre-treat all vessel segments to be stented
- If pre-dilation balloon does not fully expand, treat segments w/ short NC PTA
- “Pre-medicate” before aggressive PTA
- Always use ≥5.5 Supera (4.5-↑restenosis)
- Ratchet system can pull wire back-watch
- Stent deployment: "Mag UP, slow DOWN"
- Postdilation: Only if stent issues, but post-PTA helps if there are stent problems
When/ What NOT to do with Supera…

- Don’t use when precision needed at distal end of stent- i.e NOT for ostial SFA; stent length is NOT exact
- Do not use in segments of significant vessel size mismatch (e.g. CIA→ EIA)
- Do not oversize stent significantly
- Do not stent lesions that were not adequately pre-treated
- ~NEVER “primary stent”

CONCLUSIONS

- The Supera stent has a unique interwoven design imparting “vascular mimetic” qualities for treating femoro-popliteal lesions
- Supera has excellent clinical results with high patency & low TLR rates, & no fractures w/ long term follow up; ~independent of length
- Proper lesion preparation and stent deployment techniques are essential to the success of this device

Thank You for Your Attention!