Stents for The Common Femoral Artery:
The Good, The Bad and The Ugly

Salman Arain, MD, FACC
Assistant Professor of Medicine - Cardiology
University of Texas Health Sciences Center – Houston
Texas, USA
Disclosure

Speaker name: Salman A. Arain, MD

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)

I do not have any potential conflict of interest
Introduction

- The CFA has historically been designated as a ‘no stent zone’

- Treatment of choice - CFA endarterectomy and other surgical repair

- Concerns about CFA stent placement include
  - Device fracture
  - Kinking
  - Device failure (restenosis)
  - Exclusion of the PFA
  - Re-access for future procedures
Percutaneous Treatment of the CFA

• Not all patients are optimal candidates for CFA surgery

• Unfavorable clinical features include
  – High medical risk
  – Morbid obesity
  – Prior surgery with failure
  – High calcium burden
Percutaneous Treatment of the CFA

• Ideal strategy needs to be defined

• Basic principles
  – Angioplasty +/- plaque modification first
  – Stents reserved for failed PTA (ad hoc use)

• Ideal stent features
  – Flexibility
  – Radial strength
  – Resistance to restenosis
  – Preservation of side branches
  – Ease of delivery
Options for Endovascular Treatment

• Balloon Angioplasty
  – POBA
  – Scoring balloon angioplasty
  – Drug coated balloon angioplasty
  – Atherectomy with PTA

• Stents
  – Woven nitinol (Supera)
  – Self expanding
    • PTFE covered vs. laser cut nitinol
  – Balloon expandable
    • Bare metal vs. PTFE covered
So, what is the good, the bad and the ugly?

• Balloon Angioplasty
  – POBA – *high restenosis rates*
  – Scoring balloon angioplasty – *limited data as stand alone therapy*
  – Drug coated balloon angioplasty – *limited data*

• Role of atherectomy – *not well defined yet*
So, what is the good, the bad and the ugly?

- Stent Placement
  - Braided nitinol (Supera) – *limited data, favorable properties*
  - Self expanding – *some data, some favorable properties*
    - PTFE covered vs. laser cut nitinol tube
  - Balloon expandable – *limited data, limited utility, greatest potential for fracture*
    - Bare metal vs. PTFE covered
Stent Options for the CFA

SUPERA

VIABAHN

S.M.A.R.T.

ICAST
Supera in the CFA: 67 year old man with prior CFAE, right FP bypass and progressive claudication.

Baseline angio  TurboHawk atherectomy  Angio post-PTA  Angio with 7.5 mm Supera in place
Supera in the CFA: 67 year old man with prior CFAE and Supera placement – 9 months later

Patency – 9 mo.s
Stent architecture – before sheath insertion
Micropuncture sheath in stent
Stent architecture - final

LINC 2016 - Global Expert Exchange
Viabahn in the CFA: 72 year old woman with prior aorto-bifem., right BKA and recurrent right CFA PSA

CTA of R CFA Pseudoaneurysm

Angio showing extent of PSA
Viabahn in the CFA: 72 year old woman with prior aorto-bifem., right BKA and recurrent right CFA PSA

Angio after placement of Viabahn

Angio after placement of Viabahn
ICAST in the CFA: 83 year old man with right CFA PSA 3 days after high risk Impella supported PCI

PSA in the R CFA after 14 Fr access  
6 mm ICAST on an 8 mm balloon  
Post dilation with a 10 mm balloon  
Final angio
SMART in the CFA: 68 year old man with CAD, ICM, PAD and failed right fem.-pop. bypass surgery

Baseline Angio  Selective RLE angio  Re-entry into the true lumen  Angio following PTA
SMART in the CFA: 68 year old man with CAD, ICM, PAD and failed right fem.-pop. bypass surgery

Atherectomy using JetStream

Angio after atherectomy

Post dilation with a 6 mm balloon

Angio placement of a short SES
CONCLUSIONS

• Not all patients with CFA disease are optimal candidates for CFA surgery.

• There are multiple viable options for percutaneous treatment of the CFA, incl. PTA and/or stent placement.

• The stent type must be individualized to the clinical situation.
Thank You