Trans-radial Carotid Stenting: 
5 Tips for Technical Success

Prof. Piotr Pieniazek MD PhD

John Paul II Hospital in Krakow, 
Jagiellonian University Institute of Cardiology, 
Krakow, Poland
I have the following potential conflicts of interest to report.

Consulting; Study Honoraria; Travel Expenses; Trials Involvement:
- Boston Scientific
- Abbott
- Medtronic
- Terumo
- Balton
- Astra Zeneca
Five tips & trics for radial access for CAS

Number 1: Carotid artery and aortic arch anatomy & radial or brachial artery access !!!!

can be crucial in determining CAS feasibility & safety
Unusual situation !!!!
RICA – 95% symptomatic stenosis + hanging X-act carotid stent that was moved to the aortic arch during 2 stent implantation for ostial LCCA stenosis!!!

No touch technique of aortic arch from right radial access !!!
The Anatomy
The Anatomy
Allen’s Test - Can be performed ± Oximetry test

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- We recommend that, in the presence of an abnormal AT, the RA should not be used for cardiac catheterization unless the risk of using the femoral approach is excessive.
Unique solution for transradial access intervention!!!
Glidesheath SLENDER

Antispasmodic cocktail: 2.5mg Verapamil, 200ug Nitroglycerin and 5000 IU Heparin

I do not recommend 8 Fr sheath and proximal protection
Five tips & trics for radial access for CAS

Number 2: diagnostic catheter & guide wire selection
Typical example of radial access for carotid stenting requiring Cobra 1, 2 or 3 and Simmons 1 or 2 diagnostic catheter!!
Why do we need different wires??? Only Jindo 6cm wire was useful to introduce guiding catheter !!!!

V-18 Control wire and Advantage wire not allowed to introduce guiding cath.
Number 3: Guiding catheters or sheaths selection

Crucial issue for CAS from right radial artery is CCA intubation!!!

5Fr Terumo Destination only for LCCA intubation in case of Bovine Arch
Five tips & trics for radial access for CAS

Number 4: Neuroprotection and new additional NPD. Dystal NPD is a must!!!

All filters 6/7F compatible and PALADIN device can be also used.
Very symptomatic (recurrent TIAs) RICA stenosis in pt with Leriche Syndrome

CAS procedure with double filter protection: EpiFilter Wire and PALADIN !!!!
Very symptomatic (recurrent TIA's) RICA stenosis in pt with Leriche Syndrome

CAS procedure with double filter protection: FilterWire EZ and PALADIN !!!!
Very symptomatic (recurrent TIA’s) RICA stenosis in pt with Leriche Syndrome

CAS procedure with double filter protection: FilterWire EZ and PALADIN !!!!
Number 5: Not all carotid stents should be used for radial access

Do not use 6 Fr carotid stents
Do not use stiff stents like X-Act !!!!!!
## Competition Carotid Stents

### "Mesh" Stents

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<th>Brand</th>
<th>Material</th>
<th>Size (mm²)</th>
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<td>Terumo/Microvention</td>
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<td>W.L. Gore</td>
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<td>Ev3/Covidien/Medtronic</td>
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<td>Cristallo Ideale</td>
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*Table by Terumo, used with permission*
Roadsaver Carotid Stent-All 5 FR

- double layer micromesh scaffold
- enabling sustained embolic protection by very tight plaque coverage
- embolic protection starts with implantation of the stent into the lesion and continues throughout the process of neointimalization
- up to 50% deployment full re-sheathable and repositionable
Roadsaver the most flexible carotid stent on the market
Pts 62 y.o. after neck surgery and radiation with severe PAD
Symptomatic RICA lesion !! CAS from radial access only option !!!!
Case # 3186!! Pts 62 y.o. after neck surgery and radiation with severe PAD. Symptomatic RICA lesion!! CAS from radial access only option !!!!

Cobra diagnostic cath, Advantage 0.035”, Guider Softtip XF and SPIDER RX our routine practice (predilatation – optional)

Roadsaver stent first indication in this particular situation. Some aggressive postdilatation.
Case # 3286!! 62 y.o. patient after neck surgery and radiation with severe PAD. Symptomatic RICA lesion!! CAS from radial access was the only option !!!!

Right hemisphere before CAS

Final angio !!

Right hemisphere after CAS
Restenosis 6 Months After Surgical Carotid Endarterectomy
Pt selected for CEA due to difficult access to LCCA from femoral approach

Bovine arch one of the main indications for radial access for CAS
Multilevel restenosis after CEA required stent with good radial force. 

Most important in radial technique is stent and retrieval device delivery.
Only Carotid Wallstent (close cell), Roadsaver (meshstent) and MER (open cell) can be used for radial access.
Conclusions:

Carotid artery stenting with EPD can be safely and effective performed using radial access

In severe PAD, difficult aortic arch transradial (from right hand) CAS can be more safe then transfemoral access.

Special dedicated of DC, GW, Filters and Stents make CAS procedure fast and effective.

Due to immediate mobilization, the patients comfort is much better and discharge is usually next day.

All centres performing CAS should know the radial access technique !!!!!!!!
Thank you

John Paul II Hospital Krakow Poland