



Balloon Assisted Tracking for Challenging Anatomy

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Disclosure

- I have no relevant disclosure related to this presentation



Balloon-assisted tracking of a guide catheter through difficult radial anatomy: A technical report

Patel T, Shah S, Pancholy S.

Catheter Cardiovasc Interv. 2013 Apr;81(5):E215-8.

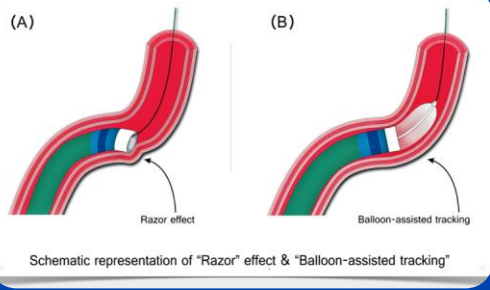


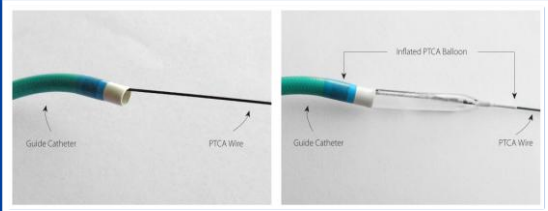
Balloon-assisted tracking: A must-known technique to overcome difficult anatomy during transradial approach

Patel T, Shah S, Pancholy S, Rao S, Bertrand OF, Kwan T.

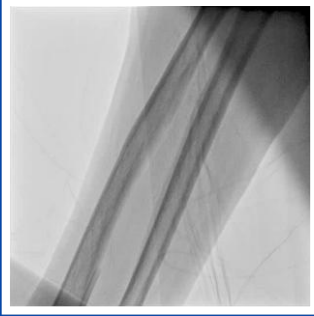
Catheter Cardiovasc Interv. 2013 Apr 16. doi: 10.1002/ccd.24959. [press]

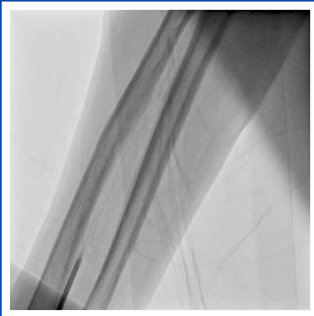




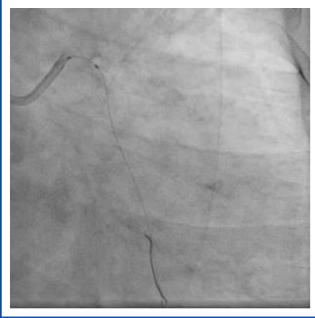


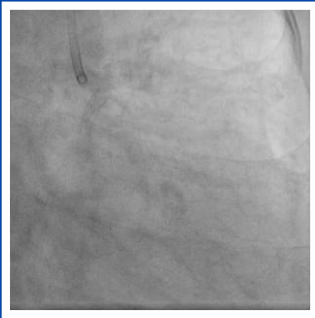
Working through small RA & 7F guide











Working through complex tortuosity of RA







Another Example





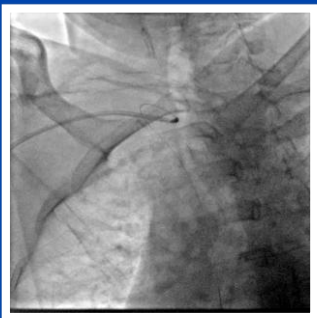


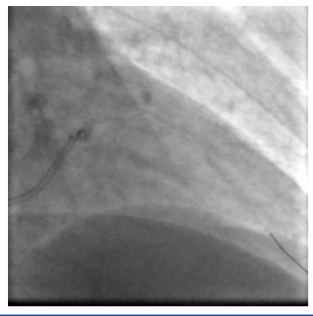
Perforation of RA & Subclavian tortuosity

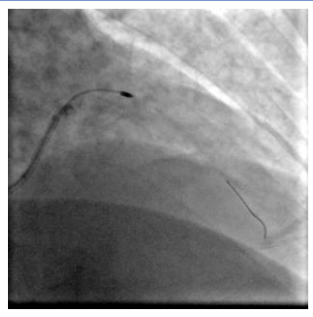




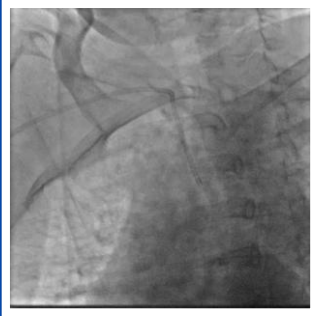














Another Example











Working through 360 degree loop









Another Example








Thank You

www.transradialworld.com







Radial access for STEMI -

Case

Ivo Bernat MD, Ph.D.




University Hospital and Faculty of Medicine Pilsen, Czech Republic

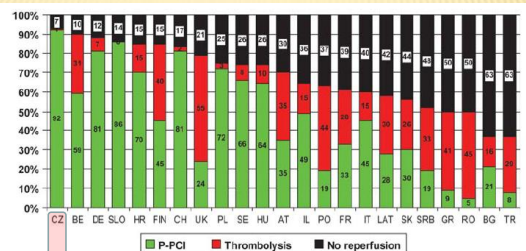


Disclosure Statement of Financial Interest

I, **Ivo Bernat** DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.




Primary PCI in Europe



Country	P-PCI (%)	Thrombolysis (%)	No reperfusion (%)
CZ	22	0	78
BE	59	24	16
DE	81	12	7
SLO	88	10	2
HR	79	14	7
FIN	45	40	15
CH	81	14	5
UK	24	54	22
PL	72	26	2
SE	66	30	4
HU	54	35	11
AT	33	48	19
IL	49	31	20
PO	18	44	38
FR	33	37	30
IT	41	24	35
LAT	29	34	37
SK	29	24	47
SRB	11	40	49
GR	19	31	50
RO	5	41	54
BG	21	16	63
TR	8	27	65

Primary PCI Centers - no thrombolysis in CZ ...

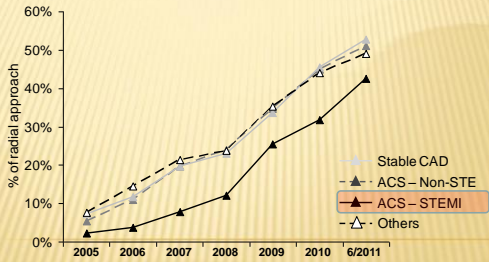
Widimsky et al. Eur Heart J 2010; 31,943-957



All Czech PCI centers (n=22) - 24/7 service for AMI since 2002



Trend in the use of radial approach in CZ (PCI)



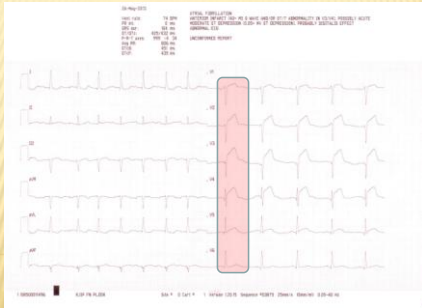
Total : 5%.....10%.....17%.....21%.....32%.....42%.....50%.....2012 >50%

Case from Sunday evening - May 26, 2013

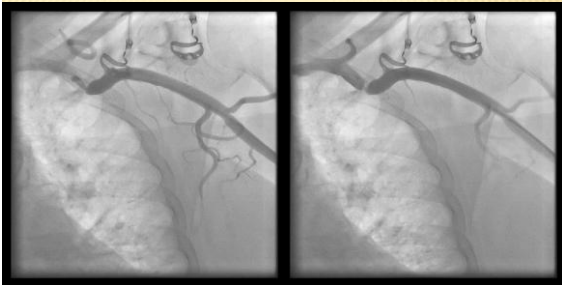
- woman - 76 y.
- treated hypertension - betabl. + ACEI
- 2 hours of chest pain
- anterior STEMI
- EMS: UFH 5000 IU i.v., clopidogrel 600 mg p.o., Aspegic 250 mg i.v.
- direct transport to our cathlab
- Our PCI center : 95% TRA incl. STEMI - 90% from the left



ECG before pPCI



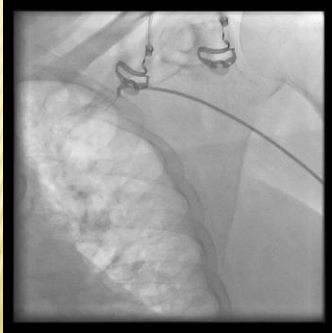
Left radial approach - 80% AS I.sin. stenosis



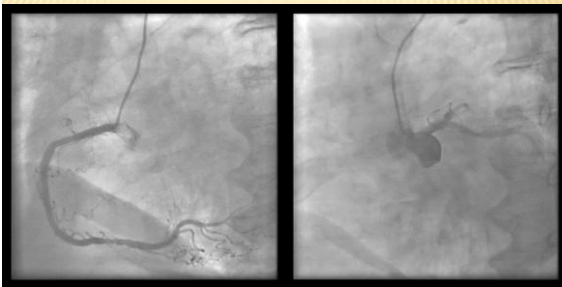
Question - go on from the left ?



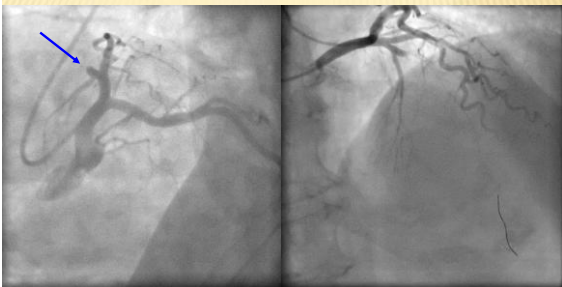
Angled hydrophilic wire 0.035



CAG with 5F dg. Tiger catheter



Next step - 5F guiding XB 3,5, bolus GPI, coronary wire...



... minimal predilatation (2,0/20mm with 4atm)



DES 3.0/16 implantation - 18 atm



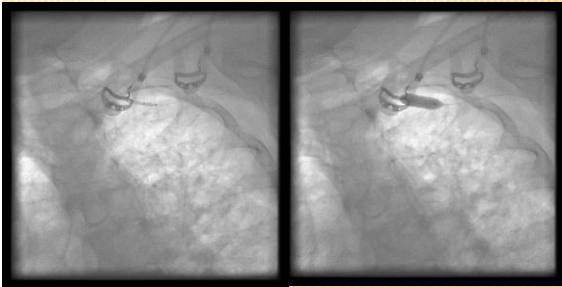
After primary PCI ...



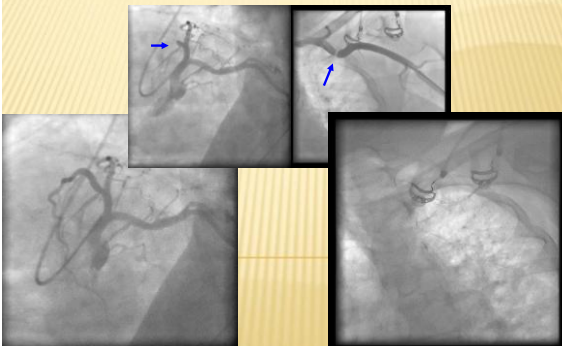
Next step - tight subclavian stenosis - to treat or not to treat
.....???



Stent 6,0/14mm (18 atm = 6,99mm) without
guiding catheter ...



Final result of pPCI and subclavian stenting



After primary PCI and subclavian stenting (contrast 150 ml, skia 9.8 min)

- radial artery compression time - 100 min
- complications - 0
- echo next day - LVEF 45%
- ICU stay - 32 hours (Sunday midnight - Tuesday morning)



Conclusion

- Transradial primary PCI (in experience radial center) is the best way how to :
 - - minimize local bleeding
 - - increase patient comfort with soon mobilisation and earlier discharge
 - - reduce the cost
 - - also reduce mortality

Additional non coronary intervention in our case was safe and easy.



Complex transradial LEFT MAIN PCI in CARDiogenic shock

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Associate-Professor of Medicine, Laval University
Adjunct-Professor, Department of Mechanical Engineering,
McGill University
International Chair on Interventional
Cardiology and Transradial Approach

Quebec Heart-Lung Institute

VuMedi-June 3, 2013



Disclosures

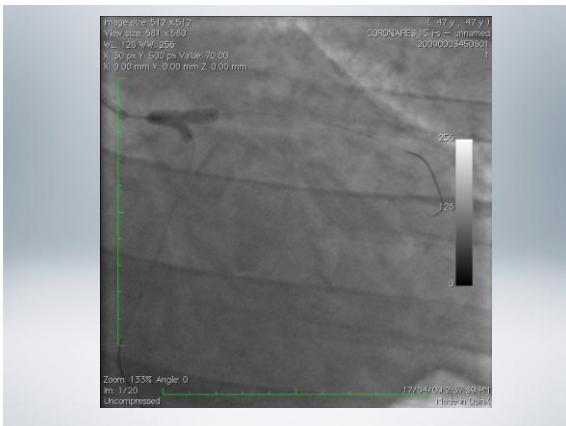
- Consultant: OPSENS

Case Scenario

- 57 y old man, crushing chest pain while working on his roof
- RF: Smoker
- ECG in ambulance: Antero-Lateral STEMI
- VF 2 episodes during transfert. Cardiogenic shock upon arrival in cath lab











Key points

- Radial access permits complex LM PCI
- Having the groins prep during cardiogenic shock allows quick access for LV support (BIA, ECMO, LVAD, Impella) and PCMK
- Biggest challenge remains to get the radial access when faint/no pulse. Role for ultrasound guidance ?

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Following the success of AIM-RADIAL in 2012,
the Organizing Committee is announcing the 2nd edition in 2013:



New York City, NY, USA

26-28
September
2013

2nd Advanced International Masterclass
AIM-RADIAL



*« An international conference on advanced radial techniques,
including scientific presentations, live cases, and forums
targeting interventional cardiologists, fellows, nurses, radiology
technicians, health professionals and industry partners »*

www.aimradial.org

Radial Access for Carotid Interventions

Sasko Kedev MD, PhD, FESC, FACC

University Clinic of Cardiology
Skopje, Macedonia

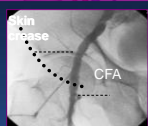
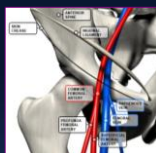
skedev@gmail.com

DISCLOSURE

- Nothing to disclose

Potential Vascular Complication Femoral Approach

- Hematoma-bleeding
- Pseudoaneurysm
- RetroPeritoneal Hemorrhage
- AV fistula
- Ischemia-Thrombosis-Emboli
- Infection
- Neuropathy



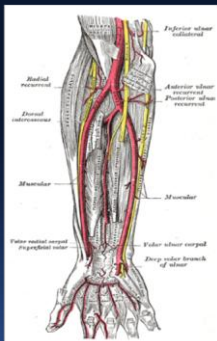


ACCESS SITE COMPLICATIONS

Vascular access is 1st reason of bleeding complications & MACE after PCI

BLEEDING INCREASES MORTALITY !!!

Radial Artery Access



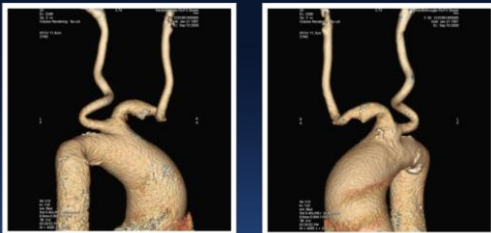
FEMORAL APPROACH LIMITATIONS for CAS

- Aorto-iliac disease or occlusion
- Previous surgical bypass at this level
- Diseased and Complex aortic arch with
- Tortuous SAA originating from elongated, or type II, III, or bovine aortic arch

Aorto-iliac Disease or Occlusion



Tortuous SAA Originating from Elongated or Bovine Aortic Arch



ACCESS SITE COMPLICATIONS

The most common adverse event after CAS from the femoral approach

MOST TECHNICAL FAILURES ARE RELATED TO A COMPLEX ARCH

Risk of catheter-related emboli in patients with atherosclerotic debris in the thoracic aorta



Karalis DG et al. *Am Heart J*. 1996 Jun;131(6):1149-55.

Alternatives to FA

- Brachial
- Radial / Ulnar
- Direct puncture

Radial Access - Alternatives

- Right Radial Artery is 1st choice !
- Right Ulnar Artery
- Left Radial Artery
- Left Ulnar Artery





TRANSRADIAL CAS

IMPORTANCE OF EARLY AMBULATION

- Patient comfort and satisfaction
- Reduced nursing cost
- Reduced vagal reaction
- Reduced hypotensive response
- Reduced bleeding complications

TRANSRADIAL CAS

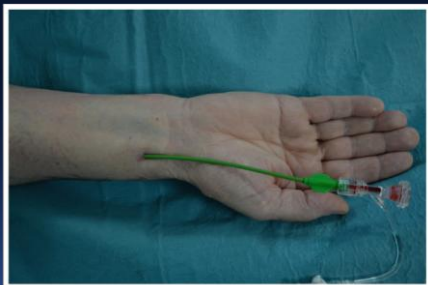
- Anchoring technique
- Telescopic approach

TRANSRADIAL CAS

Anchoring Technique

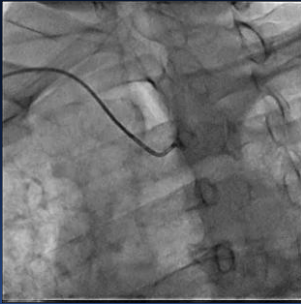
- SIM 1-3 in CCA
- Long hydrophilic GW in ECA
- Exchange with transfer catheter
- Exchange with extra stiff GW in ECA
- Advance 6F GS in CCA

TRA CAS of RICA in a patient with Acute Carotid Syndrome

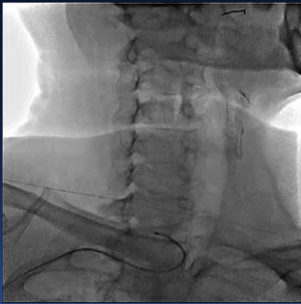


Case 1.

Left ACC 100%



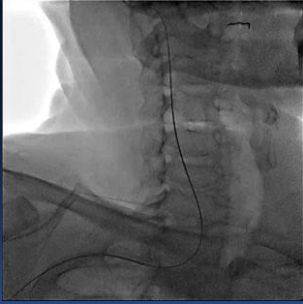
RICA



Terumo advantage wire in RECA



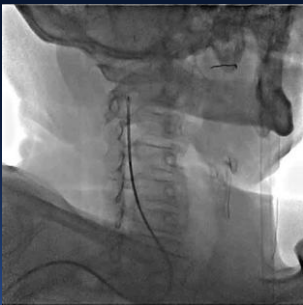
Amplatz Stiff wire in RECA



Destination sheath 6Fr



Xact 8-6/40mm



Final result



TRANSRADIAL CAS

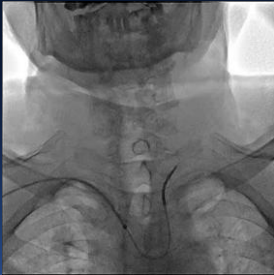
- Anchoring technique
- Telescopic approach

Case 2.

SIM 2 Cook into Shuttle Sheath



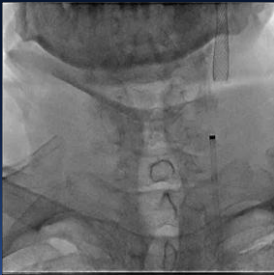
Shuttle Sheath Positioning



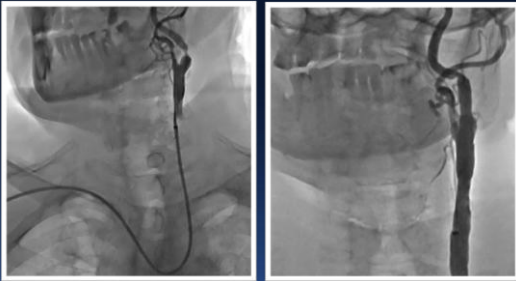
LICA 95 %



Final Result



Before / After



TRANSRADIAL CAS

- Direct Cannulation
- Simple Loop Cannulation
- Deep Loop Retrograde Cannulation

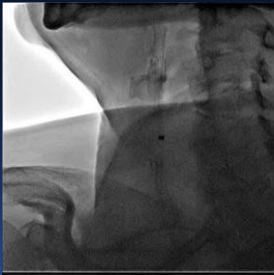
TRANSRADIAL CAS

- Direct Cannulation
- Simple Loop Cannulation
- Deep Loop Retrograde Cannulation

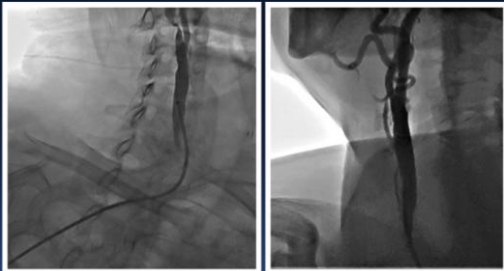
Case 3. **CAS of RICA – Direct cannulation**



CAS of RICA – Final Result



Before / After

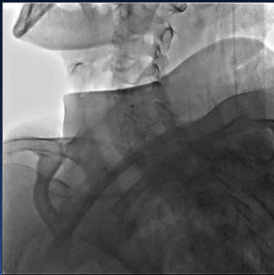


TRANSRADIAL CAS

- > Direct Cannulation
- > **Simple Loop Cannulation**
- > Deep Loop Retrograde Cannulation

Case 4.

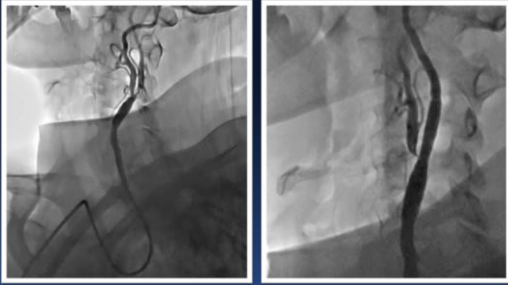
CAS of LICA – Simple Loop Cannulation



CAS of LICA - Final Result



Before / After



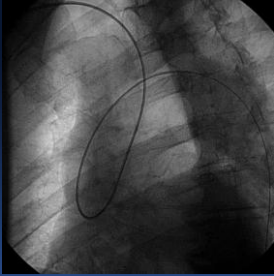
TRANSRADIAL CAS

- > Direct Cannulation
- > Simple Loop Cannulation
- > Deep Loop Retrograde Cannulation

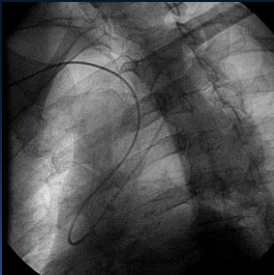
Case 5. TRA CAS of LICA – DLRC – Transfer Catheter



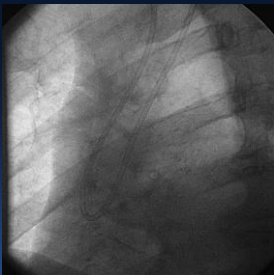
TRA CAS of LICA – DLRC – Transfer Catheter



TRA CAS of LICA – DLRC – 5F JR GC



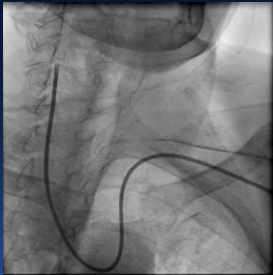
TRA CAS of LICA – DLRC – 7F MP GC



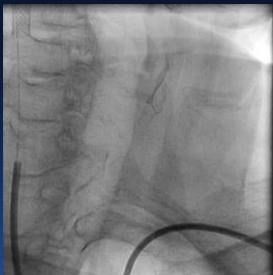
TRANSRADIAL CAS

- Right Wrist Access
- Left Wrist Access

Case 6. **Left TRA CAS of RICA – Simple Loop Cannulation**



Left TRA CAS of RICA – Final Result



Before / After

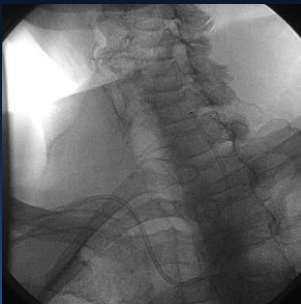


TRANSRADIAL CAS

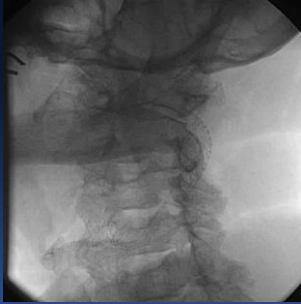
- Tortuous Internal Carotid Artery
- String Sign
- Contralateral Occlusion

Case 7.

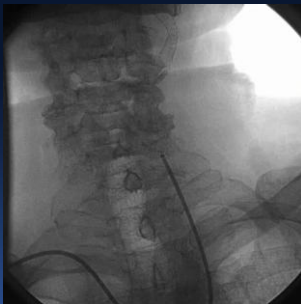
Tortuous LICA Subocclusion in Octogenarian



Stent: Precise 7.0/40mm



Final Result

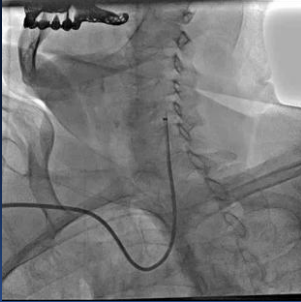


Before / After



Case 8.

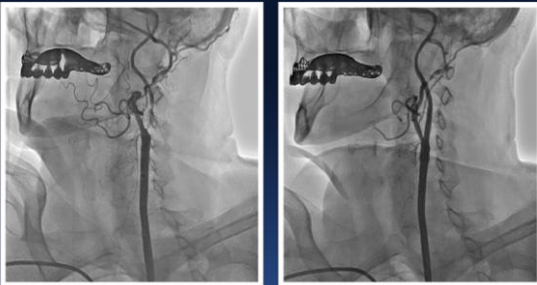
LICA: String sign



Final result



Before / After



Case 9.

TUA for CAS of LICA with contralateral occlusion

Male
J. A.
66 y.o.

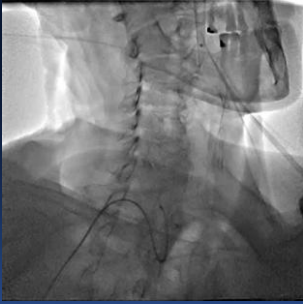
High Puncture of Ulnar Artery



High Puncture of Ulnar Artery: High Take-off of Radial Artery



RICA 100%



Destination sheath 6Fr



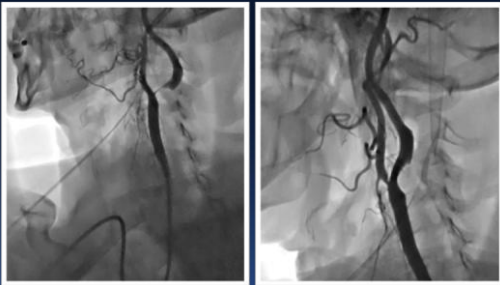
Final Result



Final Result



Before / After



Case 10.

**TRA CAS of LICA with
MoMa proximal protection**

Male
M. D.
66 y.o.



TRA



LICA 90%



MOMA proximal protection device



Stent: Precise RX 8.0/30mm



Final result



Before / After



Radial Approach - Hemostasis



Transradial CAS

ADVANTAGE

- Easy access in otherwise very complex aortic arcs
- Immediate patient mobilisation
- Reduced hypotensive response
- No bleeding
- Anticoagulation is not an issue
- Reduced nursing cost
- Outpatient performance in selected cases

Transradial CAS

DISADVANTAGE

- Significant learning curve for new TRA operators
- Sometimes longer procedure for “easy case” with type I aortic arch
- Proximal PD and larger devices could not be used freely in all cases
- Radial artery occlusion ≈ 10 %

Transradial CAS

MISTAKE

- Perform TRA only when FA is not possible !!!

Conclusions I

- TRA & TUA CAS is feasible and safe when performed by experienced TRA operator
- Easy access in difficult anatomies (bovine arch LCCA) and most of the innominate artery take offs
- Severe angulations at the origin might be negotiated safely and efficiently with DLRC as alternative of Direct and Simple Loop cannulation for CAS

Conclusions II

- Allows early patient mobilization
- Eliminates bleeding complications
- Further studies are needed before recommending wrist access (TRA or TUA) for CAS as primary approach over femoral access
