A renaissance for CAS?
Will new carotid stents and advanced protection concepts

Leipzig Interventional Course | January 24 – 27, 2017 | Leipzig, Germany

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• 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
META-ANALYSIS OF RCTS – UPDATED 2011

CONCLUSIONS:
For every 1000 patients opting for stenting rather than endarterectomy:

19 more patients would have strokes,
3 more patients would be dead

10 fewer would have MIs

CAROTID ARTERY STENTING

AS AN ENDOVASCULAR ORIENTED VASCULAR SURGEON
I BELIEVE IN THE RENAISSANCE OF CAS

WHY?
LONG TERM CREST RESULTS:
RESULTS AT 4 YEARS

THE ONLY DIFFERENCE IS HERE!!
...RENAISSANCE OF CAS

How to fill the gap with CEA?

Top 10 rules for CAS
1. Correct patient selection
TOP 10 RULES for CAS

1. Correct patient selection

2. Overview of Anatomy (Arch and intracranial vessels)
TOP 10 RULES for CAS

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2. Overview of Anatomy
3. Plaque evaluation
TOP 10 RULES for CAS

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2. Overview of Anatomy
3. Plaque evaluation
4. Pre-, Intra- & post-procedural medical therapy
TOP 10 RULES for CAS

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4. Pre-, Intra- & post-procedural medical therapy
5. Vascular access (brachial/radial/cervical)
TOP 10 RULES for CAS

1. Correct patient selection
2. Overview of Anatomy
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6. Correct Embolic Protection Device
TOP 10 RULES for CAS

_initial experience using the gore embolic filter in carotid interventions._

Significant reduction in the incidence of new cerebral ischemic lesions (45.2% vs. 87.1%, p < 0.001).

- number (p < 0.0001)
- volume (p < 0.0001)

of new cerebral ischemic reduced by proximal balloon occlusion.

(J Am Coll Cardiol 2012;59:1383–9)
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6. Correct Embolic Protection Device
7. Correct Stent
TOP 10 RULES for CAS

6. Correct Embolic Protection Device

7. Correct Stent

Double layer micromesh design

Optimal plaque coverage

Conforms to vessel anatomy
TOP 10 RULES for CAS

Terumo - Roadsaver

Gore – Mesh carotid stent

Inspire – C-Guard
3 Italian Vascular Centers

Torino: Dr. C. Rabbia Radiologist
Cotignola: Dr. A. Cremonesi Cardiologist
Siena: Prof. C. Setacci Vascular Surgeon
3 ITALIAN CENTRES

Cotignola  n= 82
Siena  n= 52
Torino  n= 16
150

(October 2014- October 2015)
ITALIAN REGISTRY – ROADSAVER
30-DAYS RESULTS

• 0% STROKE AND DEATH
• 0% TIA
• 0% MI

PROCEDURAL SUCCESS: 100%
CLEAR ROAD – participating centers

- PI: Dr. Bosiers, AZ Sint-Blasius, Dendermonde, Belgium

- Participating centers:
  - 5 Belgian centers
  - 4 German centers
  - 3 Italian centers
CLEAR ROAD TRIAL: 30-DAYS RESULTS

- 97.9% freedom from MAE
(94.4% symp patients vs 100% asymt patients)
- MAE rate: 2.1%: no notable difference between symptomatic and asymptomatic patients or between EPD use

Bosiers M, Setacci C et al, EurInterv 2016
Registry

Iron Guard
Physician-initiated prospective Italian Registry of carotid stenting with the C-Guard mesh-stent.
2. OBJECTIVES
The objective of this clinical investigation is to evaluate the clinical outcome (up to 12 months) of treatment by means of stenting with the C-Guard (InspireMD) in subjects requiring carotid revascularization due to significant extra-cranial carotid artery stenosis.
Preliminary results

From April 2015 to February 2016
165 patients included

Technical success was achieved in 98.8%

in two patients one single stent was unable to cover the whole length of plaque so that a second stent was implanted

61 on 165 patients underwent DWMRI pre and postoperatively
Preliminary results

Neurological events 30 days:

- 5 minor strokes
- 2 additional TIA
- 2 mental confusions
- 2 bradicardia lasting more than 24 hours
Preliminary results

Reinterventions:

• Redo CAS for restenosis
• stent explanted for partial thrombosis
DWMRI results:

New postoperative DWMRI lesions were detected in 12 patients (19.6%): among them 7 presented with contralateral or bilateral microembolic lesions
TOP 10 RULES for CAS

1. Correct patient selection
2. Overview of Anatomy
3. Plaque evaluation
4. Pre-, Intra- & post-procedural medical therapy
5. Vascular access (brachial/radial/cervical)
6. Correct Embolic protection Device
7. Correct Stent
8. Intravascular imaging during CAS
TOP 10 RULES for CAS

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2. Overview of Anatomy
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4. Pre-, Intra- & post-procedural medical therapy
5. Vascular access (brachial/radial/cervical)
6. Correct Embolic protection Device
7. Correct Stent
8. Intravascular imaging during CAS
9. Intracranial evaluation post-CAS
TOP 10 RULES for CAS

1. Correct patient selection
2. Overview of Anatomy
3. Plaque evaluation
4. Pre-, Intra- & post-procedural medical therapy
5. Vascular access (brachial/radial/cervical)
6. Correct Embolic protection Device
7. Correct Stent
8. Intravascular imaging during CAS
9. Intracranial evaluation post-CAS
10. **Vascular access evaluation after CAS**
**TOP 10 RULES for CAS**

• The ideal stent still *does not exists* at the moment!

• *Patient’s tailored approach* remains by now the logical answer for treating standard as well as complex carotid lesions and anatomies (different stents for different anatomies and plaque morphology)

• *New generation of stents* offering high scaffolding and conformability properties will give new rush to CAS

• ...Long term results of CAS are perfect, however *there is still room for peri-procedural improvement*!!
THANK YOU
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