Which Carotid Stenosis Patients Are Candidates For CAS in 2015: An Interventionalist’s View

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No conflict of interest in connection with this presentation.

CEA versus CAS

More than 90% of carotid stenoses can be treated with both methods with similar complication rates and long-term results.

Do we have patients who would have more benefit from CEA or CAS.

Some Selection Criteria

- clinical state
- age
- gender
- anatomy
- lesion characteristic
- multiple vessel disease
- comorbidity
- experience of operator

Some Examples

J.H. m-70
Restenosis 18 months after CEA

Why Is CAS Preferred?

- CEA possible, but with higher risk
- Intimal proliferation - Ideal for CAS
Some Examples

K.C. m-71
Recurrent stenosis 2 yrs. after CEA

Why Is CAS Preferred?

- Clamping injury?
- Intimal proliferation - Ideal for CAS

Some Examples

H.B. m-74
Left hemispheric TIA
Bovine type aortic arch
Bechterew’s disease - frozen neck
systolic flow velocity 328 cm/s

Some Examples

H.B. m-74
Right ICA occlusion
Short left ICA stenosis

Why Is CAS Preferred?

- CEA from Vascular Surgeon rejected: no access
- Contralateral occlusion:
  CEA has a higher stroke risk
  NASCET (1991) 14.7%
  SPACE (2006) 13.0%

Some Examples

H.G. f-74
TIA right hemisphere
Stenosis 8 yrs. after radiotherapy
Some Examples

- H.G. f-74, TIA right hemisphere after radiotherapy, Stenosis 8 yrs.

Why Is CAS Preferred?

- Difficult access for CEA after radical neck dissection and radiotherapy
- Extented stenosis with endo thoracic portion

Some Examples

- K.B. m-60, Sudden neck pain, TIA

Why Is CAS Preferred?

- I.R. m-66, TIA left hemisphere and...
- High location of dissection - more difficult for CEA
- ... additional pathology

Why Is CAS Preferred?

- I.R. m-66, TIA left hemisphere and...

Why Is CAS Preferred?

- D.M. m-65, Right hemispheric stroke, Right ICA occlusion
- Left tandem stenosis CCA & ICA
- CAS and TEVAR in one session, no second intervention!
**Why Is CAS Preferred?**

<table>
<thead>
<tr>
<th>D.M. m-65</th>
<th>Right-sided Stroke</th>
<th>Right ICA occlusion</th>
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**Some Examples**

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<td>Left tandem proximal and distal ICA stenosis</td>
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**Why Is CAS Preferred?**

- Contralateral ICA occlusion
- Tandem stenoses
- Bilateral aorto-iliac artery stenosis
- All lesions treated in one session

**Some Examples**

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**Why Is CAS Preferred?**

- Tandem stenoses
- Bifurcational CAS
- Stenting distal ICA stenosis
- Both lesions treated in one session
Some Examples

W.G. m-63  TIA right hemisphere

Is that all?

Some Examples

W.G. m-63  TIA right hemisphere
Additional aneurysm of anterior communicating artery!

Why Is CAS Preferred?

- Bifurcational CAS
- Prevention of subarachnoidal bleeding
- Coiling of aneurysm
  anterior communicating artery
  aneurysm occluded

Running out of Time ...

- These few example show in which cases CAS is the preferred or only means of treatment.
- CEA is the method of choice:
  - severe elongation of CCA and ICA
  - dense circular calcification of ICA