The effect of carotid stent flushing during carotid artery stenting on the delayed embolic events

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Disclosure

Speaker name:

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)

🌟 do not have any potential conflict of interest
**AIM**

**CAS....No protection after the removal of the filter !!!**

<table>
<thead>
<tr>
<th>Stroke</th>
<th>Delayed embolic stroke, major and minor during the first 24h</th>
<th>Post-deployment flushing of the inner stent surface in order to reduce delayed embolic neurological events.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve</td>
<td>• Technique</td>
<td>Remove more debris of the plaque during distal filter protection</td>
</tr>
<tr>
<td></td>
<td>• Materials</td>
<td>Reduce delayed embolic major or minor stroke - TIA</td>
</tr>
</tbody>
</table>

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METHODS

From May 2015 to July 2017

64 Patients with stenosis ICA

- CAS
- LOCAL ANESTHESIA
- FEMORAL APPROACH

with flush
A1
33 P
M:23
Mean age 68,6y
F:10
Mean age 67,4y

without flush
A2
31 P
M:25
Mean age 70,9y
F:6
Mean age 71,2y

% Stenosis of ICA

Symptomatic

Mean stenosis

80,70%
76,80%
81,20%
75,50%

A2
A1

Risk Factors
Step 5

Step 1

Step 2

Step 3

Step 4

Step 6

Step 7

Step 8

Under local anesthesia
Femoral approach
Carotid Stent System PROTEGE

7 fr FR4 guide catheter

Postdilatation with balloon 5mm

Filter Spider FX

RINSE TECHNIQUE

5. Before filter protection removal !!!

Under injection 80ml heparinized N/S (5000IU/1 lit 0.9% N/S) in the area of the STENT

Remove the filter and collect the fragments for visual cytology

FILTER COLLECTION

VISUAL CLASSIFICATION

% PLAQUE DEBRIS AREA
RESULTS

- Technical Success 96.9%
- Mean Time Hospitalization 2.6d
- Death 0%

- Dual antiplatelet therapy pre-, postoperative and for 6 months 100%
- Statins 100%
- **Neurological status**
  - 1º 24h
  - 1º m
  - 3º m
RESULTS

• Brain DW-MRI
  Delayed emboli without neurological status
  – 25(A1)/100(A2) ipsilateral
  – 20(A1)/60(A2) contralateral.

• 0% ICU
• 100% FOLLOW UP
• 0% DEATH IN 30d
• 0% new clinical neurological events
RESULTS

Visual quantification

% collected plaque material in filter

% collected plaque material in filter

A1

A2
Conclusion

- Post-deployment flushing of the inner stent surface in CAS
  1. Safe technique
  2. Improve the results of CAS
  3. Increase the collected debris in the filter
  4. Reduce the clinical neurological post-procedural events

In the FUTURE

- Expected larger studies
- Comparative cohorts with and without flushing many others factors as stents, pro- or /and post dilatation, dedicated catheters
- Other factors
Thank you for your attention