Value Of Carotid Interposition PTFE Grafts For Failed, Difficult Or Redo CEA Procedures:
Technical Tips, Precautions And Results

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Disclosures
• None

Indications for graft interposition

A. Preoperative (elective)
B. Intraoperative (technical problems)
C. Perioperative (urgent)

Indications for graft interposition

A. Preoperative (elective)
• Recurrent carotid artery stenosis
• Aneurysm of CCA / ICA
• Tumors
• Significant kinkings of the ICA
• Long segment stenosis with exulcerations
• Dissection

Indications for graft interposition

B. Intraoperative
• Technical problems during endarterectomy
  (failed CEA / EEA of the ICA)

Indications for graft interposition

C. Perioperative (urgent)
• Postoperative complications
  (thrombosed endarterectomized segment)
• Bleeding
Materials

Graft-Interposition:
- Saphenous vein
- Synthetic: Dacron
  - PTFE

Advantages of PTFE Grafts in Carotid Surgery

- Readily available
- Easy surgical handling
- Optimal late results

Nuremberg South Hospital (08/1984-10/2008)

Technical tips

1. Dividing the overlying veins and dissect the artery to mobilize the hypoglossus nerve
2. 6mm PTFE graft (i.e. Gore)
3. Long, oblique end-to-end anastomosis at the ICA
4. Fogarty catheter is helpful if the anastomosis is very high
5. Anastomosis on the inlying Fogarty

Precautions

1. 6mm PTFE graft and Fogarty balloon catheter on stock
2. Magnifying lenses for the cranial anastomosis
3. Keep the blood pressure high during clamping

Graft Interposition in Carotid Surgery

Mean follow-up 28.2 months (3-103)

Patency rate:

- PTFE: 100.0 %
- Vein: 94.6 %
### Literature review


1. 1988-2005, 41 CIP procedures in 39 patients using PTFE, \( n = 31 \) or reversed greater saphenous vein (Vein) \( n = 10 \).
2. There were no significant differences in demographics, risk factors, operative indications, complications, or 30-day perioperative deaths.
3. There was one postoperative stroke in each group, for an overall stroke rate of 4.9% (PTFE 3.2%, Vein 10%).


2. PTFE interposition: 51, CEA: 427 (95.3% with patch closure).
3. Long-term patency and stroke-free survival rates at 3 years exceeded 90% and did not vary significantly between groups.

**Conclusion:**
1. Carotid interposition with PTFE graft is an acceptable alternative in cases the standard technique would be technically difficult or compromising to the endarterectomy closure.
2. Carotid ePTFE interposition seems to be safe and durable.

### Conclusions

1. PTFE interposition reconstruction is an effective and durable bailout procedure for reoperation after CEA.
2. Analysis of pooled literatures and the results of this study shows that ePTFE appears to be superior to vein and Dacron for interposition bypass graft.

### Thank you for your attention!