Is There a Current Role for EC-IC Bypass Despite Level 1 Evidence—What Is Its Role?

Mark A Adelman, MD

Frank J Veth Professor and Chief
Division of Vascular and Endovascular Surgery
Vice Chairman, Department of Surgery
NYU Langone School of Medicine

Disclosures

• None

EC-IC Bypass for Occlusive Disease

• EC-IC Bypass Group (Multicenter RCT, 1377 patients)
  • EC-IC bypasses 714 patients
  • Medical Management 663 patients
  • Mean follow up 56 months
  • Trend toward Medical Management (p=NS)

• Japanese EC-IC bypass trial—JET (RCT 195 patients)
  • EC-IC bypass
  • Medical Management
  • Mean follow up 25 months
  • (p=NS)


Case Presentation

• 56 yo male
• No PMH, PSH
• Severe headache

Unsuccessful coil embolization

Imaging demonstrates a ruptured Giant (2.7 x 1.3cm) intracranial Right ICA bifurcation aneurysm

M2 Aneurysm A1
N1
KA
Routine saphenous harvest

Standard ipsilateral carotid exposure

Craniotomy incision
Dissecting off the temporalis

Isolating the MCA (distal Target)

DRILLING A HOLE THROUGH THE ZYGOMA
Tunneling Pretragal, Intrazygomatic

Distal anastamosis performed first
Aneurysm exclusion with flow

Intraoperative angiogram

Partial Bone/Temporalis

Postoperative Management

- Cerebral Angiogram at 48 hours
- ASA 325 mg (Lifelong)
- Duplex scan 3m, 6m, 12m, annually

Discharged home on POD 5
Neurologic intact on Discharge and Follow up
Conclusions
• EC-IC bypass clinically useful (rarely) for Giant Intracranial Aneurysm
  • Failed endovascular solution
• Technically Challenging
• Durable Procedure
• Takes a Village