IF CERTAIN TECHNIQUES ARE EMPLOYED, PATCH CLOSURE AFTER CEA IS NOT ALWAYS NEEDED AND PATCH CLOSURES HAVE COMPLICATIONS

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CEA PATCH NOT ALWAYS NEEDED

Disclosures
None

CEA PATCH NOT ALWAYS NEEDED

Three Way Debate

GOOD
BAD
UGLY

CEA PATCH NOT ALWAYS NEEDED

Three Way Draw

CEA PATCH NOT ALWAYS NEEDED

The Good

Fundamental Question

Do You have to "Patch" every CEA like "Many Propose" or can you be Selective?

Can you assess or control for TECHNIQUE in a clinical trial and therefore dictate what the technique should be?

NO
CEA PATCH NOT ALWAYS NEEDED

To Patch

Or Not To Patch

CREST Study

Effect of Patching on Reducing Restenosis in the Carotid Revascularization Endarterectomy Versus Stenting Trial

Mahmoud Mokar, MD, MPH, Nada O. Gevorg, MD, PhD, Sara F. Hagan, RN, Joseph S. Vologos, PhD, Amin Qasmi, MD, MPH, Wesley A. Moore, MD, Rajesh K. Lal, MD, George Howard, MPH, Kariel Linco, MD, Thomas G. Redd, MD

(Stroke, 2015;46:757-761)

Patch Primary

Vascular: 11% ? Selective
Cardiothoracic: 24% ? Selective
Neurosurgeon: 94% NOT Selective

No difference in Stroke/Death at 30 d or 4 years
Restenosis Criteria: >300 cm/s

Patch Primary

CEA: 753 (65%) 329 (29%) Restenosis: 3.1% 10.7% p=.006

Options to Close Artery

Options for Artery reconstruction without patch

Primary Closure longitudinal arteriotomy
Eversion Endarterectomy

Technical Considerations

2.5mm bites= 5mm
13.8mm circumference
4.4mm artery, 15.2 cm²

1mm bites= 2mm
16.8mm circumference
5.4mm artery, 22.6 cm²

DIFFERENCE 33%
Primary Closure

- 5-6mm
- 8-10mm

Eversion Endarterectomy

- 20-30mm

Personal Results (1998-2014)

- 22 Redo CEA of 1460
- 7/477 Primary closure (1.5%)
- 14/754 Patch (1.9%)
- 1/207 Eversion (0.5%)
- Fisher exact: p=0.345
- Chi square: p=0.33, p=0.84

Complications Patch

- Carotid aneurysm
- Patch infection
- Adds expense: $160 - $400

Patch Infection

- Incidence: 3 series 36/5833 (0.6%)
- ALL patch materials: ePTFE, Dacron, Bovine pericardium, vein
- Treatment of patients: Stroke/Death 8-40% in series
CEA PATCH NOT ALWAYS NEEDED

Patch Infection

CREST Vascular Surgeons
• Stroke and Death: 1.2%
• Patch infection ADDS 0.6%
  THEREFORE
  Major morbidity/mortality = 1.8%

CEA PATCH NOT ALWAYS NEEDED

Conclusion

• Selective Patching is a rational approach
• Restenosis may be affected by use of a patch depending on the artery size
• Patch infections add apx 0.6% to the major morbidity of CEA

CEA PATCH NOT ALWAYS NEEDED

Thank You