Distal Vertebral Bypass
It Can Be Easier Than You Think
Indications and How To Do It
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VEITH Symposium
New York, November 13, 2018

Disclosure Statement of Financial Interest
I have no conflict of interest to disclose related to this presentation.

Distal Vertebral Artery Bypass
Surgical Indications

- **Symptoms of VB Ischemia** (most common)
  - From stenosis/occlusion proximal to C2, not amenable to a proximal transposition.
- **Positional Ischemia** from proximal compression
- **Embolism or Aneurysm** from proximal Dz

A distal vertebral artery bypass for VB ischemia is indicated only if the contralateral carotid artery is:

- Occluded
- Severely stenotic
- Hypoplastic
- Ends in a PICA

Preop Angiogram to identify target vessel at V3

Positional Vertebro-Basilar Ischemia
Bow Hunter’s Syndrome
27 y/o male with dizziness and difficulty with vision in both eyes when head turned to the right, followed by nystagmus.

Neck in neutral
Neck rotated to R. and extended
Vertebral occludes at C-3
(Right vertebral ends in a PICA)
Distal VA bypass: Positioning and incision

- Earlobe sutured to face to expose mastoid
- Torso elevated to reduce venous pressure
- Retro-Jugular Approach

Left sided Exposure

- ECA
- ICA
- C1 transverse process
- Levator scapulae
- Spinal accessory nerve

Levator scapulae transected

- C-1 Transverse Process
- Levator Scapulae

Anterior ramus of C2 nerve dissected off the vertebral artery

- ICA
- Spinal accessory nerve
- Ant. Ramus of C2 nerve

Ramus of C2 nerve is transected and endings tagged for retraction exposing VA

- C2 ramus cut ends
- Vertebral artery

Perivertebral venous plexus controlled with bipolar and vertebral encircled with a loop

- Transsected levator scap. muscle at C1
- Vertebral artery
ACT > 300 secs. VA clamped baby Cooley clamp, distal anastomosis with 7-0 BV 175 prolene (or Scanlan 3003-616 Clamp for smaller) VA arteriotomy

Completion duplex scan

Distal vertebral bypass graft 6 years P/O

Thank You
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