SURGICAL RECONSTRUCTIVE TECHNIQUES
POST-ENDOVASCULAR ABLATION OF HEAD AND NECK VASCULAR MALFORMATIONS

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FINANCIAL DISCLOSURES
None

IDEAL PROPORTIONS
Portraits of celebrities from Warwick Saint. Natalie Portman (Princess Amidala in Star Wars)

PRINCIPLES OF REPAIR
• Begin with the end in mind
• Not excision of vascular lesion itself (nidum)
• Four tissue levels with volume considerations:
  - Skin, Fat, Muscle, Bone
• Three dimension (H x W x D) in proportion
• Function: Animation, speech, mastication, airway
• Stage Repairs
• Err on conservative excision
• Relaxed Skin Tension Lines
• Facial Esthetic Units

RECONSTRUCTIVE STEPS
• Photographic documentation
• Predictive drawings outlining flaps, excision, tissue grafting, and stages
• Confirm clearance of major of AVM
• 24-72 hours after embolization.
• Blood transfusion
• Anesthesia/Airway/Hypotension
• Postop healing considerations.
CASE 1

27 yo female with AVM that presented at 7 years of age. Over past several years she has had multiple embolization procedures with Dr. Yakes. There is hypertrophic growth and pressure from the upper lip has pushed the maxillary teeth on the right side into a palatal cross-bite and open bite.

Vermillion texture deformity, old vertical lip scar, thick venous nodular upper and lower lip, displaced commissure, maxillary deformity with malocclusion.

Marking for skin excision with an Austin commissural lift.

New vermilion position with tacking sutures and outline of lip reduction stage.

Undermining mucosal flap at wetline.

Excision of central lip fibrofatty tissue.
Removal of fibrofatty tissue with Colorado needle
Additional undermining of mucosal flap while protecting lip flap
Temporary closure of wetline to assess volume and position
Additional excision of vermillion to gain symmetry with the left side
Placement of dermal fat graft at vermillion white line for projection
Horizontal mattress cutaneous closure for everting the vermillion white line.

CASE 2
16 yo female. Congenital AVM. Tongue reduction at age 3. Post \textit{ETOH} embolization. \cite{3} macrognathia, and excessive lower facial growth.

Note large vertical excess growth. Anterior tongue scarred and narrow. Occlusion is Class II openbite.
Cephalometric analysis showing lower face vertical mandibular excess.

Stage 1: Tongue reduction and submental suction and open liposuction.

Stage 2: Genioplasty osteotomy of inferior border with intermediate wedge removal.

Stage 2: Assess after chin wedge removal obtained for submental and sublingual fibrofatty tissue excision with genioglossus advancement.

POSTOP STAGE 2

Post op panorex with wire fixation

Post op panorex with wire fixation
PARTING SHOTS

- Fibro-fatty tissue with vascular channels.
- Vascular supply to flaps not well defined.
- Wound dehiscence not uncommon.
- Muscles of facial expression preservation.
- Standard osteotomies and osteoplasties unless central AVM’s require resection.
- Be patient.

I have to catch a plane.

King Kong