“….with few exceptions, their cure by surgical means is impossible. We intuitively thought that the only answer of a surgeon to the problem of disfiguring, often noisome and occasionally disabling blemishes and masses, prone to cause bleeding, pain, or other unpleasantness, was to attack them with vigor and with the determination of eradicating them. The results of this attempt at radical treatment were disappointing.”
Patients

VM/LM : AVM 3:1 Ratio
Head & Neck 1,517
Upper Extremity 1,044
Lower Extremity 2,019
Chest/Abdomen 1,310
Pelvis/Buttock 909

Minor Complications

Skin Injury 272
Temporary Nerve Injury 98
Superficial Blood Clot 24
Infection 143
Bleeding 31

Major Complications

DVT 24
PE 9
Pneumothorax 6
Permanent Nerve Injury 4
Cardio-Pulmonary Arrest 4
Amputation 2
Hypoxia/Airway Compromise 13
Complications from Focal Swelling 14
Cerebrovascular Accident 4
Peripheral Ischemia 11
Anaphylaxis 1
Bowel Perforation 2

Ethanol Endovascular Management of Complex Low-Flow Venous & Lymphatic Vascular Malformations of the Head, Neck, and Tongue
21 year old male with Rt retro-orbital venous malformation causing severe exophthalmos, but surprisingly no loss of vision despite the chronic stretching of his Rt Optic Nerve and effacement of the posterior globe.
Lest We Forget..... Complication can occur in low-flow vascular malformations......

20 month old female with MASSIVE LM in Lt face, neck, submandibular area, tongue, cervical prevertebral tissues, suboccipital area, supraclavicular area, requiring tracheostomy and G-tube.
22 year old female with massive venous malformation of the left chest, neck & supraclavicular area with congenital absence of the Lt Axillary & Lt Subclavian vein with a rudimentary stump of the Lt Innominate vein. Due to repeated PE for 22 years, has severe pulmonary HTN and is wheelchair bound.
33 year old male with a massive AVM of Rt. peri-mandibular, intra-parotid, and paraspinal anatomic areas. The Pt. suffered from pain, pulsatile tinnitus, and a growing palpable lesion. The patient had several consultations for various treatments and eventually decided upon ethanol endovascular embolization.
Multiple Yakes Type IIa & IIIb AVMs

26 year old male with severe back pain, bilateral lower extremity paresis, and intermittent bowel and bladder dysfunction.