

Vascular Surgery

Length:	2 to 4 months of PGY-3 or PGY-4 year
Location:	Straub Clinic & Hospital
Primary Supervisor:	Elna Masuda, M.D.
Contact Telephone #:	522-4469

Goals

Upon completion of the Vascular Surgery rotation, the Resident will have been provided an introduction to the diagnosis, treatment, and pre- and postoperative management of basic vascular diseases, including:

1. Arterial insufficiency of the lower extremity (claudication, rest pain, ischemic tissue loss).
2. Management of the diabetic foot.
3. Carotid artery disease.
4. Abdominal aortic aneurysm (AAA).
5. Venous disease (acute and chronic).

Objectives

At the end of this rotation, the Resident will be able to:

Medical Knowledge

1. Demonstrate an accurate and thorough understanding of various therapeutic options for vascular surgery conditions (conservative, endovascular, operative).
2. Verbalize the principles of evaluation and operative management of ruptured abdominal aortic aneurysms and thromboembolic complications of peripheral aneurysms.
3. Know angiography related complications and their treatment
4. Discuss surgical anatomy related to peripheral vascular disease.

Patient Care

1. Demonstrate knowledge of common vascular and cerebrovascular insufficiency symptoms, including amaurosis fugax, transient ischemic attacks, hemispheric and vertebrobasilar symptoms.
2. Define the role of the vascular laboratory and interpret all arteriograms performed during the rotation.
3. List indications for carotid endarterectomy.
4. Discuss medical versus surgical therapy (review of recent multi-center randomized studies) of vascular disorders, such as carotid artery disease.
5. Discuss the treatment of symptomatic disease and studies for asymptomatic disease.
6. Demonstrate and describe the preoperative evaluation of aortic aneurysm disease, including:

- a. clinical history
 - b. physical examination
 - c. plain abdominal x-ray findings
 - d. importance of family history
7. Discuss treatment of AAA, including:
 - a. CT scan and ultrasound criteria for surgery
 - b. operative approach and surgical anatomy (demonstrate the ability to plan an aortic aneurysm or peripheral aneurysm repair, choice of incision, sites of proximal and distal anastomosis, clamp placement, technical factors required to preserve flow based on preoperative imaging studies.
 - c. endovascular treatment of aneurysms
 8. Demonstrate knowledge of postoperative ICU management of AAA, with emphasis on fluid requirements and management of postoperative bleeding.
 9. Demonstrate ability to preoperatively manage lower extremity arterial disease, including:
 - a. clinical history
 - b. ankle brachial index
 - c. role of vascular laboratory
 - d. role of angiography, and angiography-related complications and their treatment
 10. Discuss the treatment of lower extremity arterial disease, including:
 - a. surgical bypass: autologous versus prosthetic graft
 - b. role of endo-vascular techniques, including balloon angioplasty, stents, atherectomy, and percutaneous stent and graft placement
 11. Discuss preoperative diagnosis and work-up of the diabetic foot, including neuropathy and infection, with and without ischemic changes.
 12. Discuss indications for surgical drainage and debridement of diabetic foot problems.
 13. Demonstrate ability for patient education and proper foot care, including use of orthotics.
 14. Describe the diagnostic work-up of deep venous thrombosis and the inaccuracies or the severe limitations of the hand-held Doppler in duplex scanning.
 15. Discuss the medical and surgical management of acute venous disease, including the role of fractionated heparin and thrombolytic therapy.
 16. Discuss aspects of chronic venous disease, including:
 - a. diagnosis by clinical history and examination
 - b. importance of hand-held Doppler and Duplex scanning
 - c. role of ascending and descending venography
 - d. medical and surgical management

Systems-based Practice

1. Understand the multidisciplinary role of the Vascular Surgeon, Nurses, the Operating Room Team, and the Vascular Laboratory Technicians in the provision of safe and high quality vascular surgery care.

Professionalism

1. Interact with patients and their families in a respectful, sensitive, and ethical manner.
2. Interact with other members of the Vascular Surgery Team and ambulatory clinic personnel in a respectful, responsible, and professional manner.

Practice-based Learning and Improvement

1. Demonstrate ability to utilize scientific studies to provide high quality vascular surgical care.
2. Appropriately utilize Hospital information technology systems to manage patient care, and to access on-line medical information to deliver high quality care.
3. Facilitate and supports the education of Medical Students, Junior Residents, and other healthcare team members.

Interpersonal and Communication Skills

1. Demonstrate skill in effective information exchange with patients, their families, and other members of the Vascular Surgery Team.
2. Demonstrate ability for accurate and timely information exchange between other members of the healthcare team, both verbally and in writing, with appropriate use of the medical record.

Implementation

This rotation is held at Straub Clinic and Hospital under the direction of Dr. Elna Masuda. Residents are to report to Dr. Masuda on the first day of their rotation for an orientation and a detailed outline of their roles and responsibilities.

Required Readings

Residents will be expected to maximize their educational opportunities by reading about anticipated and real conditions encountered in their training. Dr. Masuda will assign readings from the following texts:

Ernst, C.B., and Stanley, J.C., 1995: *Current Therapy in Vascular Surgery*, (B.C. Decker, Inc.).

Moore, W.S., 1991: *Vascular Surgery; A Comprehensive Review*, (Philadelphia: W.B. Sanders Co.).

Rutherford, Robert, 2000: *Vascular Surgery, 5th Edition*, (W.B. Sanders, Co.)

Texts are available from Dr. Masuda.

Residents are also expected to supplement their textbook reading with current peer-reviewed publications.