

COURSE OUTLINE

DI 155 - Doppler Vascular Imaging

(Credit hours: 30 lectures (2 credits)
Lectures / Mondays 12:30pm – 03:15pm)

DATE	LECTURES
01/12/09	<p>Cerebrovascular anatomy & pathology Anatomy, Physiology and Hemodynamics Aortic arch. Upper extremity. Cervical carotid Vertebral. Intracranial (circle of Willis).</p> <p><i>Mechanisms of disease.</i> Risk factors. Atherosclerosis. Dissection. Thromboembolic. Subclavian steal. Carotid body tumor. Fibromuscular dysplasia. Neointimal Hyperplasia. Thoracic outlet syndrome.</p>
01/26/08	<p>Cerebrovascular pathology Transient symptoms. Stroke. Physical exam (neurologic, bruits, bilateral brachial pressures). Transcranial Doppler. Takayasu arteritis. Treatment of giant cell (temporal) arteritis. Cerebral Aneurysm.</p> <p><i>Miscellaneous diagnostic tests (methods, interpretation, limitations):</i> Arteriography. MR angiography. CT. Duplex imaging (B-mode, Doppler, color Doppler).</p> <p>TEST 1 (30 questions)</p>
02/02/09	<p>Peripheral Arterial diseases. Anatomy, Physiology and Hemodynamics. Aortic arch. Upper extremity. Abdominal aorta Lower extremity. Microscopic.</p> <p><i>Mechanism of disease.</i> Risk factors. Atherosclerosis. Embolism. Aneurysm. Nonatherosclerotic lesions (arteritis, vasospastic disorders, dissection, entrapment syndromes). Signs and symptoms. Testing (upper and lower extremity). Ankle-Brachial Index (ABI).</p> <p>TEST 2 (15 questions)</p>
02/09/09	<p>Peripheral Arterial diseases. Chronic disease (claudication, rest pain, tissue loss) Acute arterial occlusion (thrombosis, emboli). Physical examination (skin changes, pulse palpation, auscultation). Stenosis. Occlusion. Aneurysm. Bypass graft (intraoperative, post-operative surveillance) Doppler waveformstop: stenotic and occlusive disease, blind ended channels, steal phenomena, arterio-venous connections and effects of the cardiac pump. Duplex imaging (B-mode, Doppler, color Doppler). Plethysmography. Photoplethysmography (digital pressures and cold stress).</p> <p>TEST 3 (15 questions)</p>
02/23/09	<p>Peripheral Arterial. Popliteal Arterial Entrapment Syndrome <i>Treatment.</i> Medical (pharmacologic, lifestyle modification). Endovascular (angioplasty, stent). Surgical (endarterectomy, bypass).</p> <p>MIDTERM TEST (70 questions)</p>

03/02/09	<p>Peripheral Venous Anatomy (Deep, superficial and perforating), Physiology and Hemodynamics. Upper extremity. Lower extremity. Central (vena cava, innominate/brachiocephalic). Venous wall and valves. Duplex imaging (B-mode, Doppler, color Doppler)</p> <p>Peripheral Venous Mechanisms of disease. Risk factors. Acute venous thrombosis. Deep/Superficial. Chronic deep venous obstruction. Chronic venous valvular insufficiency (primary, secondary). Varicose veins. Congenital. Pulmonary embolism. TEST 4 (15 questions)</p>
03/09/09	<p>Duplex imaging (B-mode, Doppler, color Doppler) Peripheral Venous Signs and symptoms. Acute/Chronic venous thrombosis (skin changes, lymphedema, ulceration). Duplex imaging (B-mode, Doppler, color Doppler) Continuous wave. Chronic venous insufficiency/obstruction Venography (methods, interpretation, capabilities, limitations). Reflux plethysmography (air, photo).</p> <p>Peripheral Venous Treatment. Anticoagulation. Thrombolytic therapy Vena caval filter. Support hose. Surgical. TEST 5 (15 questions)</p>
03/30/09	<p>Abdomen/visceral Anatomy, Physiology and Hemodynamics. Arterial (celiac, mesenterics, renals, hepatic) Venous (vena cava, renal, portal, mesenteric) Mechanisms of disease. Risk factors. Renovascular hypertension. Mesenteric ischemia. Portal hypertension. Signs and symptoms. Duplex imaging. Angiography. TEST 6 (15 questions)</p>
04/06/09	<p>Abdomen/visceral Miscellaneous conditions. Preoperative vein mapping. Pseudoaneurysms, arteriovenous fistulae. Dialysis access. Organ transplants (renal, liver) Abdomen/visceral Preoperative arterial mapping (radial, epigastric, mammary). Temporal arteritis.</p> <p>REWIEV.</p>
04/13/09	<p>FINAL EXAMINATION (120 Q)</p>

COURSE OUTLINE

DI 155 - Doppler Vascular Imaging

(Credit hours: 30 lectures (1 credits)

Laboratory / Tuesdays 12:30pm – 03:15pm

weeks	DATE	ULTRASOUND HSND-ON LABORATORY TRAININGS
1	01/13/09	Carotid and Vertebral Duplex Ultrasound.
2	01/20/09	Carotid and Vertebral Duplex Ultrasound
3	01/27/09	Arterial Vascular Imaging
4	02/03/09	Arterial Vascular Imaging
5	02/10/09	Peripheral Venous Imaging
6	02/17/09	Peripheral Venous Imaging
7	03/24/09	Abdominal blood vessels imaging
8	03/03/09	Abdominal blood vessels imaging
9	03/10/09	Presentation
10	03/31/09	FINAL HANDS-ON EXAMINATION