

GENERAL MEDICINE

Goals:

1. Assimilate general concepts of internal medicine, history taking and physical examination skills to develop a systemic evaluation for patients presenting to the emergency department.
2. Learn the pathophysiology, presentation, and management of diseases related to the alimentary tract.
3. Develop knowledge of the pathophysiology, presentation, and management of common hematologic diseases.
4. Master the understanding of the components of the immune system, and the disorders of hyper- and hypofunction of the immune system.
5. Know the major systemic infectious disorders, their diagnosis and treatment.
6. Learn the pathophysiology, evaluation, and treatment of renal disorders.
7. Develop knowledge of the etiologies, manifestations, and treatment of endocrine and metabolic disorders.
8. Master an understanding of the diseases of the respiratory system, including pathophysiology, evaluation, and treatment.

Objectives:

1. Demonstrate appropriate history taking skills for all patients presenting to the emergency department.
2. Demonstrate the ability, based on the history acquired, to do an immediate assessment and initial stabilization, followed by a complete directed examination.
3. Combine the knowledge defined in the objectives below with the history and physical examination, to develop an appropriate differential diagnosis for all presentations.
4. Demonstrate knowledge of the causes, presentation, and management of oesophageal problems.
5. Describe the etiologic agents, pathophysiology, and management of infectious diarrhoea.
6. Demonstrate the ability to evaluate, manage, and appropriately disposition patients with gallbladder and liver disorders.
7. Demonstrate knowledge of the presentation, diagnosis, and management of obstructive lesions of the alimentary tract.
8. Demonstrate the ability to perform intubation procedures of the alimentary tract, including, but not limited to, NG tube insertion and anoscopy.
9. Describe the presentations, work-up, and appropriate treatment of patients with inflammatory processes of the alimentary tract.
10. Demonstrate familiarity with the evaluation, treatment, and appropriate disposition of patients with gastrointestinal bleeding.
11. Demonstrate knowledge of the proper evaluation and treatment of the patient with sickle cell disease.
12. Describe the appropriate steps in the assessment and treatment of the patient with bleeding disorders.
13. Demonstrate knowledge in the work-up, treatment, and appropriate disposition of the patient with anemia.
14. Demonstrate understanding of the appropriate use of transfusions of blood components, including diagnosis and treatment of transfusion reactions.
15. Demonstrate familiarity with the mechanism and manifestations of immune compromise, including that caused by infection with HIV.

16. Discuss and be able to differentiate non-AIDS causes of immune hypofunction.
17. Discuss the manifestations, initial treatment, and appropriate disposition of patients with rheumatologic and autoimmune diseases e.g. SLE.
18. Demonstrate understanding of the work-up and treatment of patients with hypersensitivity reactions.
19. Demonstrate knowledge of the concepts of cellular and humoral immunity and the proper use of immunizations in patients presenting to the emergency department.
20. Demonstrate familiarity with the manifestations of, evaluation for, and treatment of bacterial infections, especially including gonorrhoea, syphilis, tuberculosis, and tetanus.
21. Describe the diagnostic criteria for, and the treatment of, toxic shock syndrome.
22. Know the characteristics of sepsis in different age groups.
23. Demonstrate knowledge of the appropriate initial treatment of the patient with possible sepsis.
24. Discuss the manifestations of, treatment of, appropriate disposition for, and immunization (when appropriate) of patients with viral infections.
26. Demonstrate knowledge of the time course, vectors, and treatment of the more common protozoal diseases.
27. Demonstrate familiarity with the causes, presentation, initial management and disposition of patients with glomerular disorders.
28. Describe the common etiologic agents, and appropriate work-up and disposition of patients with infections of the renal system.
29. Discuss the common causes, metabolic manifestations, treatment (including dialysis) and disposition of patients with renal failure.
30. Describe the common complications of dialysis therapy and how they manifest in patients presenting to the emergency department.
31. Define the etiologies, and demonstrate understanding in the evaluation and treatment of patients with acid/base disorders.
32. Demonstrate understanding of the etiologies, manifestations, and treatment of fluid and electrolyte abnormalities.
33. Discuss the manifestations, work-up, treatment, and disposition of patients with disorders of glucose metabolism.
34. Demonstrate understanding of the common endocrine abnormalities, especially regarding presentation, initial evaluation and management, and disposition.
35. Discuss acute treatment for patients presenting with disorders of severe malnutrition.
36. Demonstrate knowledge in the etiologic agents causing, presentation and evaluation, and disposition of patients with infections of the respiratory system.
37. Describe the etiology, manifestation, and treatment of patients with acute and chronic airway disease.
38. Discuss the predisposing factors, presentation, and appropriate treatment of patients with pulmonary embolus.
39. Demonstrate knowledge of the potential presentation, work-up, treatment and appropriate disposition of patients with chest masses.
40. Demonstrate understanding of the aetiologies, diagnosis, and treatment of adult respiratory distress syndrome and multisystem organ failure
44. Demonstrate an understanding and management of the various presentations of patients with HIV AIDS to the Emergency Room

CARDIOVASCULAR

Goals:

1. Demonstrate the ability to stabilize patients who present in cardiopulmonary arrest.
2. Develop skills in the evaluation of patients who present with chest pain.
3. Demonstrate the ability to evaluate, stabilize, treat, and arrange for appropriate disposition of patients with cardiac disease processes.
4. Demonstrate the ability to develop a differential diagnosis for patients presenting with cardiac symptomatology (chest pain, shortness of breath, weakness, palpitations), etc.
5. Demonstrate skill in the interpretation of diagnostic modalities (ECG, chest x-ray and cardiac ultrasonography).
6. Develop a familiarity with cardiac pharmacological agents.
7. Demonstrate skill at cardiac related procedures: venous line and CVP pressure monitoring, pericardiocentesis, defibrillation and cardioversion, Swan ganz catheterization, and ultrasonography.
8. Demonstrate the ability to diagnose, stabilize, and apply thrombolytic therapy to patients presenting with acute early myocardial infarction.

Objectives:

1. Demonstrate the ability to perform an appropriate history and physical examination on the patient presenting with cardiac symptomatology.
2. List items elicited from the history of patient with chest pain to suggest a risk for cardiac etiology.
3. Discuss limitations in differentiation of cardiac chest pain from non-cardiac pain in patients with risk factors.
4. Describe the pathophysiology of cardiac ischemia, acute angina chest pain, and acute myocardial infarction.
5. Describe the typical electrocardiograph findings of patients with myocardial ischemia and myocardial infarction.
6. Discuss differential diagnosis of atypical chest pain.
7. Discuss atypical presentations for acute cardiac ischemia and myocardial infarction. Discuss the concept of "silent" myocardial infarction and ischemia.
8. Discuss the sensitivity and specificity of ancillary studies for chest pain presentations including EKG, chest x-ray, cardiac enzymes, and arterial blood gases.
9. Differentiate between stable and unstable angina and outline the initial treatment of patients with unstable angina including the use of nitrates, beta blockers, calcium channel blockers, etc.
10. Discuss the significance of acute complete atrio-ventricular block with inferior myocardial infarction versus anterior myocardial infarction.
11. Demonstrate knowledge of AHA recommendation for the treatment of acute ventricular fibrillation, ventricular tachycardia, asystole, pulseless electrical activity, atrial flutter and fibrillation, junctional ectopy, pre-excitation, supraventricular tachycardia, and bradycardia, sick-sinus syndrome, atrial ventricular blocks (first degree, second degree and third degree) and bundle branch blocks.
12. Describe the clinical findings of cardiogenic shock and outline therapy for cardiogenic shock.
13. Differentiate cardiogenic shock from other etiologies for shock.

14. Describe the clinical presentation for pericardial disease and outline the appropriate initial therapy and management for pericardial disease.
15. Describe the presentations for myocardial infarction and their association with vessel involvement.
16. List the indications, contraindications and complications of thrombolytic therapy for acute myocardial infarction.
17. Describe the clinical presentation, etiologies for pathophysiology of, and current therapy for acute congestive heart failure.
18. Describe the valvular anatomy of the heart and list etiologies for valvular heart disease.
19. Describe the clinical findings of a mitral valve prolapse, valvular aortic stenosis, aortic regurgitation, tricuspid stenosis, tricuspid regurgitation, and pulmonary stenosis, and discuss management of each of these valvular abnormalities.
20. List complications of prosthetic cardiac valves and appropriate emergency department management.
21. Differentiate between congestive cardiomyopathy, hypertrophic cardiomyopathy and restrictive cardiomyopathy and discuss therapy for each.
22. Define myocarditis and describe the EKG findings and acute management of myocarditis.
23. Discuss the pathophysiology of acute pulmonary embolism and the predisposing factors for pulmonary embolism.
24. Discuss the sensitivity and specificity of the various tests used to diagnosis pulmonary embolism including arterial blood gases, EKG, chest x-ray, etc.
25. Discuss the sensitivity and specificity of ventilation perfusion scan in acute pulmonary embolism.
26. Outline treatment for acute pulmonary embolism.
27. Differentiate between acute hypertensive emergencies, hypertensive urgency, and uncomplicated hypertension.
28. Discuss the indications for treatment of hypertension in the emergency department.
29. Describe the syndrome of hypertensive encephalopathy.
30. Outline the treatment for acute hypertensive emergency and differentiate treatment in the setting of thoracic aortic dissection.
31. Differentiate between primary agents for hypertensive emergency to include their advantages and disadvantages.
32. Discuss the pathophysiology, etiology, and overall morbidity and mortality of patients presenting with acute aortic dissection.
33. Explain the emergency department management of acute aortic dissection.
34. Differentiate between expanding, ruptured, and dissecting aortic aneurysms.
35. Describe the pathophysiology and clinical presentation for acute peripheral ischemia and outline the emergency department management.
36. Differentiate between superficial and deep venous thrombosis.
37. Outline the emergency management of acute thrombophlebitis.
38. Discuss the pathophysiologic connection between thrombophlebitis and pulmonary embolism.
39. Discuss the use of thrombolysis in acute thrombophlebitis.

