

The Hashemite University

Faculty of Medicine MD Program Curriculum

EMERGENCY MEDICINE CLERKSHIP COURSE LEARNING OUTCOMES

1. Explain the role of Emergency Departments and Emergency Medicine as a specialty
2. Describe the initial evaluation, assessment and stabilization of patients presenting with urgent and emergent medical illnesses and injuries to the ED
3. Introduction to different invasive and non-invasive procedures that are performed in the ED such as arterial punctures, peripheral IV draws and cannulation, suturing lacerations, lumbar punctures, NG tube insertion, urinary bladder catheterization, resuscitation skills, airway management and many other procedures.
4. Enhance basic clinical skills such as history taking and physical examination and teach how to identify and treat life threatening conditions
5. Enhance effective communication and facilitation of patient care

RESOURCES

Handbooks

- 1- Toronto Notes Emergency Medicine.
Provided by Department.
- 2- Emergency Medicine PreTest Self-Assessment and Review, By Adam Rosh (Author).
Provided by the Department.

Online Resources and Podcasts

- 1- Emergency Clerkship Primer
Available online at:

<http://www.ucdenver.edu/academics/colleges/medicalschoo/departments/EmergencyMedicine/Education/Documents/EM%20Clerkship%20Primer.pdf>

- 2- Life in the fast lane- (ECG Interpretation)
<https://litfl.com/>

- 3- EMRA Guide to Patient Presentations
<https://vimeo.com/132285159>

- 4- EM Clerkship Podcast
<http://emclerkship.com/>

Additional References

1. The ABCs of Emergency Medicine by Laura Hans.
Provided by the Department.
2. Tintinalli's Emergency Medicine: A Comprehensive Study Guide, Judith E. Tintinalli, O. John Ma, Donald M. Yealy, Garth D. Meckler, J. Stephan Stapczynski, David M. Cline, Stephen H. Thomas.
Provided by the Department.

EMERGENCY MEDICINE CLERKSHIP CLERKSHIP DETAILED OBJECTIVES

(A) LECTURE/ SEMINARS OBJECTIVES

1- Approach to Chest Pain (2 Lectures/Seminars)	1. Be able to list the potential life-threatening causes of chest pain among patients presenting to the ED with emphasis on the following four critical diagnoses: a. Acute Coronary Syndrome (ACS) b. Aortic dissection c. Pulmonary Embolism d. Tension Pneumothorax 2. List the key features in history and physical examination that must elicited in patients presenting to the ED with chest pain 3. Describe the general, immediate actions and interventions taken for high risk patients presenting with chest pain 4. Recognize the typical and atypical presentations of ACS with emphasis on risk factors, description of pain, associated features, physical exam findings, and populations with atypical presentations 5. Be familiar with the life-threatening pattern of ECGs for patients with chest pain 6. Describe the initial interventions, diagnostic testing, and management priorities of patients presenting with ACS. 7. Describe the presentation of aortic dissection in the ED and recognize the difficulty yet the importance of reaching the diagnosis 8. List the risk factors for aortic dissection 9. Describe the different classification schemes for artc dissection 10. Describe the imaging modalities used in aortic dissection 11. Be able to differentiate the management priorities between Stanford A and B artc dissection 12. Discuss the classic signs and symptoms for PE and DVT 13. Be able to use clinical decision rules to assess the pretest probability of PE/DVT (Well' criteria, D-Dimer)
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	14. Compare imaging modalities used in the diagnosis of OE/DVT 15. Describe initiation of treatment of suspected/confirmed PE in the ED including the role of thrombolytics 16. Consider pneumothorax as part of the differential diagnosis of chest pain and shortness of breath 17. Be able to recognize the examination and radiographic features of pneumothorax including the use of ultrasound 18. Be able to recognize tension pneumothorax and understand its emergent treatment
2- Approach to Shortness of breath	1- List the serious and potentially life-threatening causes of shortness of breath among patients presenting to the ED with emphasis on the following four critical diagnoses: - Pulmonary edema/ CHF - Asthma - COPD 2- Describe the key features in history and physical examination that must be elicited in patients presenting to the ED with shortness of breath 3- Describe the initial approach and immediate interventions taken for patients presenting to the ED with shortness of breath 4- Identify the signs of symptoms for acute exacerbations of congestive heart failure and understand the significance and burden of the disease among the local community in Jordan 5- Identify key findings of congestive heart failure on chest x rays and the utilization of other diagnostic testing including BNP 6- Compare various ED treatment options for acute pulmonary edema 7- Recognize the clinical presentation of acute asthma and keep in mind potential mimics of asthma that might be life-threatening 8- Initiate therapy for acute asthma exacerbation and determine disposition based on clinical and objective information 9- Describe the typical patient presentation of a COPD exacerbation including possible home oxygen therapy induced hypercarbia and altered LOC 10- Understand the routine treatment of a patient with a COPD exacerbation including non-invasive positive pressure ventilation
3- Approach to Abdominal pain	1- List the critical diagnoses for abdominal

	pain, including the following - Intestinal Obstruction - Mesenteric Ischemia - Abdominal Aortic Aneurysm (AAA) - Appendicitis - Pancreatitis - Cholecystitis/Cholangitis - Gynecologic Emergencies (ectopic pregnancy, ovarian torsion) - Discuss the initial assessment and management of a patient presenting to the ED with abdominal pain - Describe the classic historical and physical exam findings for the above critical abdominal pain diagnoses - Discuss the utility of laboratory testing in the evaluation of abdominal pain - List the common causes of a small bowel obstruction and the utility and limitations of plain imaging - Recognize the importance of mesenteric ischemia as a differential diagnosis early in the presentation of abdominal pain and list the different causes - Discuss imaging modalities, especially point of care ultrasound, for the screening and diagnosis of AAA and why it is important to keep it in mind as part of the differential of abdominal/back/flank pain - Discuss the roles of laboratory tests and imaging in the diagnosis of appendicitis - Describe the spectrum of biliary tract disease, diagnostics, and treatment options - Explain difficulties associated with making an accurate diagnosis of ectopic pregnancy and stressing the importance of ordering pregnancy tests in every woman of childbearing age with abdominal pain or symptoms - List common presenting signs and symptoms of ovarian torsion and the advantages and disadvantages of the different imaging modalities
4- Approach to Cardiac Arrest (2 Lectures/Seminars)	- Describe the different causes of cardiac arrest - Describe the BLS primary survey - Describe the ACLS secondary survey - Discuss the importance of basic airway maneuvers in maintaining a patent airway during a cardiac arrest code - Describe the technique for bag-valve mask ventilation as a rescue and a bridge for a definitive airway (endotracheal tube) - Understand the importance of effective chest compressions - Understand the indications and

	importance of early defibrillation in a code 8- Recognize the following cardiac rhythm patterns that contribute to cardiac arrest and their potential causes: - Ventricular fibrillation - Ventricular tachycardia - Pulseless Electrical Activity (PEA) - Asystole 9- Go through the different medications used in a code and their indications and dosages including epinephrine, Amiodarone and Lidocaine 10- Go through and understand the different ACLS algorithms for cardiac arrest
5- Environmental/Toxicologic Emergencies	1- List the key elements of history and physical exam in an overdose patient 2- Describe the types of decontamination and specific contraindications for their use, including activated charcoal, gastric lavage, whole bowel irrigation and cathartics 3- Recognize the classic toxidromes including anticholinergic, sympathomimetic, cholinergic, and opioid poisoning with example of each toxidrome 4- Discuss important specific intoxications including - Paracetamol - Aspirin - Tricyclic antidepressants (TCA) 5- Describe the pathophysiology of paracetamol intoxication, Rumack Matthew nomogram, and the role of N-acetylcysteine (NAC) as an antidote 6- Describe aspirin toxicity presentation, role of enhanced elimination and urinary alkalization, and the role of hemodialysis 7- Describe TCA toxicity presentation, ECG findings, and role of bicarbonate in the treatment 8- Overview of the following environmental emergencies: - Hyperthermia and heat stroke - Hypothermia - High-Altitude Illness - Drowning
6- Approach to Trauma	1- Discuss the components of the primary survey in line with ATLS protocol 2- Discuss possible pathology that can occur in each domain of the primary survey and recommend treatment/stabilization measures. 3- Discuss the secondary survey as a head to toe examination with particular attention to head/central nervous system (CNS), cervical spine, chest, abdominal, and musculoskeletal trauma.

	4- Discuss the importance of checking and securing the airway as the first element in the primary survey with emphasis on basic airway maneuvers, maintaining c-spine immobilization, clearing the airway of secretions and indications for intubation 5- Describe potential pathologies interfering with breathing and how to handle them 6- Describe the role of FAST scan in the assessment of the C component of the primary survey 7- Discuss the Glasgow Coma Scale and its utility in the D component of the primary survey 8- Discuss appropriate labs and diagnostic testing in caring for a trauma patient and describe appropriate disposition of a trauma patient.
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