



ENC(C) Review Questions

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1. A patient presents to the triage desk telling you that they are undergoing chemotherapy for a mediastinal lymphoma and were told to come to the ED for persistent fever. They are pale and their skin is very warm to touch. Vital signs:
 - - 38.5
 - HR - 92
 - BP - 108/62
 - RR - 20
 - SaO₂ - 92% on room air
2. Which of the following do you anticipate being the highest priority activity for this patient?
 - A. CBC to identify potential febrile neutropenia
 - B. Consult to oncology to manage chemotherapy alterations
 - C. Application of oxygen to improve oxygen saturation
 - D. Skin examination to identify potential sites of infection
 - E. Withhold antibiotics until a causative organism has been identified
3. A 35-year-old female presents with polyuria and polydipsia. Laboratory tests reveal low urine osmolality and high serum osmolality. She is diagnosed with Arginine vasopressin deficiency (central) diabetes insipidus (DI). What is the most appropriate initial management for this patient?
 - A. Initiation of Conivaptan therapy
 - B. Administration of antidiuretic hormone
 - C. Fluid restrictions
 - D. Correct underlying cause
4. A 30-year-old primigravida patient at 30 weeks gestation was a belted passenger in the front seat of a vehicle involved in a motor vehicle collision; extrication took 30 minutes. Upon arrival in the emergency department (ED), she is moaning in pain and vaginal bleeding is evident. Crystalloid solution is infusing via peripheral large bore intravenous (IV) access. Assessment and diagnostics reveal abruptio placentae and subsequent disseminated intravascular coagulation (DIC). Based on the pathophysiology of DIC, which of the following therapies would you anticipate?
 - A. Aggressive crystalloid administration
 - B. Vitamin K administration
 - C. Tranexamic acid (TXA) administration
 - D. Blood product administration
5. You receive a 21-year-old patient with newly diagnosed schizophrenia into the ED. They are experiencing acute schizophrenic episodes with increasing frequency, for which they have been prescribed high-dose haloperidol for initial management. Which of the following serious complications associated with this class of antipsychotic medication should you watch for?
 - A. Diarrhea
 - B. Neuroleptic malignant syndrome
 - C. Serotonin syndrome
 - D. Hypercoagulability
6. You have accompanied a patient to ultrasound for evaluation of a DVT of the right lower extremity. While undergoing the ultrasound the patient states, "I can't catch my breath." Which of the following assessment findings would lead you to evaluate the patient for a potential pulmonary embolism?
 - A. Tachycardia
 - B. Drowsiness
 - C. Pyrexia
 - D. Hypertension

Correct Answers

1. Correct Answer: A.

Rationale: The definition of neutropenia is a neutrophil count of <1500 or 1000 cells/microL. Febrile neutropenia can be a life-threatening complication for patients receiving chemotherapy (Chao & Lim, 2019; Issa et al., 2015). Patients undergoing chemotherapy resulting in neutropenia have an increased risk of developing serious infections for which they will present to the emergency department (Chao & Lim, 2019). Wingard (2022a) notes that the inflammatory response may be blunted in patients with neutropenia and fever may be the only symptom. Rapid identification of fever in a patient undergoing chemotherapy can improve outcomes as fever may be the only presenting symptom (Pritts, 2020a, Wingard, 2022b). Alterations to chemotherapy

protocols may occur but it would not take precedence over identification and management of the infection (Cameron, 2009). Identification of the source of the infection such as the site and the type of organism are again important but rapid initiation of empiric antibiotic therapy should precede culture results (Pritts, 2020a, Cameron, 2009). Oxygen saturation of 92% is adequate and application of oxygen inappropriate in the absence of respiratory distress or hypoxemia.

2. Correct answer: B.

Rationale: Central diabetes insipidus (DI) is characterized by a deficiency of vasopressin, leading to the inability to concentrate urine and consequent polyuria and polydipsia (Bichet, 2024). Laboratory findings include a urine osmolality of less than 300 mosmol/kg. Initial management would include administration of ADH or dDAVP (Christ-Crain et al., 2023; Bichet, 2024; Recznik, 2020). Other management would include fluid replacement rather than fluid restrictions (Recznik, 2020). Conivaptan is used to manage hyponatremia in SIADH (Sterns, 2024; Tomkins et al., 2022). Central DI is both hereditary and acquired so extensive investigation into the underlying cause would be inappropriate in the ER (Bichet & Verbalis, 2023).

3. Correct answer: D

Rationale: DIC is a disorder that involves both bleeding and clotting simultaneously and can result in interruption of the clotting cascade with consumption of coagulation factors (Pritts, 2020a). Treatment relies on management of the underlying disease process. However, in the ED, we will also focus on managing the patient's presentation based on physical assessment and laboratory findings. Given the history of traumatic injury with abruptio placenta we must assume that massive bleeding is the underlying process and would anticipate administration of blood products such as platelets and fresh frozen plasma to be the most supportive intervention until the bleeding can be managed definitively (Belfort, 2023; Wada, 2014; Pritts, 2020a).

Crystalloid administration is the first choice for resuscitation associated with bleeding. However, overhydration with crystalloid should be avoided as they do not contain the required coagulation factors and can worsen bleeding (Okoye et al., 2022; Erez et al., 2022). Vitamin K might be appropriate for bleeding associated with underlying liver disease or vitamin K deficiency. Although there is a role for TXA with chronic DIC (Gatate et al., 2017), TXA is generally avoided with acute DIC because of the risk for venous thrombus formation (Nishida et al., 2017; Leung, 2020).

4. Correct answer: B

Rationale: The *UpToDate Lexidrug* (2024) notes that neuroleptic malignant syndrome has been associated with all antipsychotics for all ages of patients with males being more than twice as likely to develop it. It is believed to be associated with autonomic nervous system dysregulation and a decrease in CNS dopaminergic tone (Wijdicks, 2022; Lauriello & Campbell, 2024). Constipation, rather than diarrhea, would be a possible side effect for haloperidol administration (UpToDate Lexidrug, 2024). Serotonin syndrome is seen with serotonergic drugs (Boyer, 2023). Coagulation is not known to be affected by haloperidol.

5. Correct answer: A

Rationale: Emboli arising from a deep vein thrombosis is the most common source of pulmonary embolism (Thompson, 2023). Dyspnea is the most common clinical manifestation and is frequently accompanied by restlessness, apprehension, tachycardia and tachypnea (Miller, 2022; Thompson & Kabrhel, 2023). Patients would more likely be agitated initially, although unrelieved hypoxia may eventually lead to decreased level of consciousness (Foley & Sweet, 2019). Pyrexia would indicate an infection (Miller, 2022). Hypotension can occur associated with decreased cardiac output related to the right sided heart failure (Miller, 2022).

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