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| Tanta University Faculty of Medicine Anesthesia, SCC& Pain Medicine Dep. Date: 13 / 8 / 2018 | Exam: MD – 1st Part: (Pharmacology) No. of Questions: 4 Times allowed: 3 hours Total marks: 45 marks |  |
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Q 1. . A 64-year-old man is scheduled for urgent surgery for an expanding infra-renal abdominal aortic aneurysm. His past history is remarkable with IDDM, hypertension, and drug-eluting stents for LAD & right coronary arteries 3 month ago. He is receiving clopidogrel and aspirin as dual anticoagulants. Considering the risk of intraoperative bleeding due to the dual antiplatelet therapy, which one of the following statements is the most correct? Explain your answer for each item.

(6 marks)

- A. Both drugs exert their effect through the same mechanism.**
- B. Clopidogrel does not add significantly to the risk of bleeding posed by aspirin.**
- C. Both drugs can be antagonist.**
- D. Stopping of both drugs one day prior to surgery is enough to minimize the risk of bleeding.**
- E. Clopidogrel should be discontinued 7 days prior to elective surgery that require hemostasis.**

Q 2. A 54-year-old woman weights 110 kg presents with fracture neck of the left femur. Her past medical history is remarkable with IDDM for more than 20 years. The preoperative laboratory workup reveals; blood urea nitrogen of 40 mg/dl, serum creatinine 3.4 mg/dl, ALT more than double the normal value, and INR 1.4. Postoperatively, she developed a sudden onset of tachycardia and shortness of breath. A diagnosis of pulmonary embolism is made by helical CT scan. Enoxaparin (LMWH) 160 mg/12 subcutaneously is initiated. Regarding the prescribed dose of enoxaparin in her sitting, which one of the following statements is the most correct? Explain your answer for each item. (6 marks)

- A. The dose is high, because dosing should be based on the ideal body weight.**
- B. The dose is high, because of hepatic dysfunction.**
- C. The dose is high, because of renal dysfunction.**
- D. The dose is low, because of morbid obesity and increased volume of distribution.**
- E. The dose is low, because of increased cytochrome P450 activity.**

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Q 3. Patient with chronic liver insufficiency is at a high risk of perioperative morbidities.

A. Outline the pharmacological effects of liver insufficiency?(4 marks)

B. Discuss perioperative opiates use in patient with liver insufficiency?(4 marks)

C. Explain risk of postoperative bleeding in patient with liver insufficiency?(4 marks)

Q 4. An ideal drug should satisfy the requirements of safety, effectiveness, efficacy, and efficiency, which can be tested by clinical trials.

A. Define sensitivity and specificity of a test.(4 marks)

B. Clarify the meaning of the following terms: prospective, randomized, controlled, double-blind study. (4 marks)

C. Outline the features of safe local anesthetic. (5 marks)

D. How would you manage a cardiac arrest due to local anesthetic toxicity? (8 marks)

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