



美国医师执照考试 (USMLE) Surgery 外科学 (第12版)

- 500 USMLE-style questions and answers
- Detailed explanations for right and wrong answers
- Targets what you really need to know for exam success
- Student tested and reviewed

Lillian S. Kao
Tammy Lee



外 科 学

(第12版)



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北京大学医学出版社

图书在版编目 (CIP) 数据

外科学= Surgery: 英文/ (美) 郅 (Kao, L. S.),
(美) 李 (Lee, T.) 编. —影印本.

—北京: 北京大学医学出版社, 2010. 1

(美国医师执照考试丛书)

ISBN 978-7-81116-864-8

I. ①外… II. ①郅… ②李… III. ①外科学—医师
—资格考核—美国—自学参考资料—英文 IV. ①R6

中国版本图书馆 CIP 数据核字 (2009) 第 215665 号

北京市版权局著作权合同登记号: 01-2009-6353

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Surgery: PreTest™ Self-Assessment and Review, Twelfth Edition

ISBN 0-07-159863-4

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外科学 (第 12 版)

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出版发行: 北京大学医学出版社 (电话: 010-82802230)

地 址: (100191) 北京市海淀区学院路 38 号 北京大学医学部院内

网 址: <http://www.pumpress.com.cn>

E - mail: booksale@bjmu.edu.cn

印 刷: 北京东方圣雅印刷有限公司

经 销: 新华书店

责任编辑: 冯智勇 责任校对: 齐 欣 责任印制: 张京生

开 本: 889mm×1194mm 1/32 印张: 11.75 字数: 302 千字

版 次: 2010 年 1 月第 1 版 2010 年 1 月第 1 次印刷

书 号: ISBN 978-7-81116-864-8

定 价: 38.00 元

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外 科 学 Surgery

PreTest™ Self-Assessment and Review

Notice

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出版说明

美国医师执照考试 (United States Medical Licensing Examination, USMLE) 是针对全世界各国医学院的学生或毕业生, 欲到美国从医的执照考试, 考试全部为选择题, 采用计算机考试。考试分为:

Step 1 (第一阶段): 考察医学基础学科知识, 包括解剖学 Anatomy, 生理学 Physiology, 生物化学 Biochemistry, 微生物学 Microbiology, 病理学 Pathology, 药理学 Pharmacology, 遗传学 Genetics, 营养学 Nutrition, 神经科学 Neuroscience 等。

Step 2 (第二阶段):

(1) 临床医学知识 (Clinical Knowledge, CK): 包括内科学 Medicine, 外科学 Surgery, 妇产科学 Obstetrics and Gynecology, 儿科学 Pediatrics, 神经病学 Neurology, 家庭医学 Family Medicine, 急诊医学 Emergency Medicine, 预防医学 Preventive Medicine 等。

(2) 临床技能 (Clinical Skill, CS): 要通过 Step 1、Step 2 及 TOEFL 之后才能报考, 主要是考察考生的临床实践操作知识。

Step 3 (第三阶段): 测试考生的实际工作能力。内容包括采集病史、体格检查、诊断、治疗措施, 以及医疗法规等。

USMLE 在北京、上海和广州设有考点, 在中国大陆可参加 USMLE Step 1 和 USMLE Step 2 CK 的考试。考试介绍及报名情况可参见 <http://www.ecfmg.com>

为了帮助有志于参加 USMLE 的考生更好地复习, 北京大学医学出版社全面引进了 McGraw Hill 公司的两个著名 USMLE 复习品牌丛书: PreTest 系列、FIRST AID 系列。这两套丛书经过多次再版, 受到世界各地考生的欢迎。本次引进的均为其最新版本。

当前, 我国很多医学院校在进行英文授课、考试的改革, 本书对国内从事英语授课、考试的教师和学生也有重要的参考价值。为广大的医学生和医务工作者比较中美医学教育和自己掌握的知识提供参考。同时, 该书也是学习专业英语的好教材。

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Introduction

Surgery: PreTest™ Self Assessment and Review, Twelfth Edition, is intended to provide medical students, as well as house officers and physicians, with a convenient tool for assessing and improving their knowledge of medicine. The 500+ questions in this book are similar in format and complexity to those included in Step 2 of the United States Medical Licensing Examination (USMLE). They may also be a useful study tool for Step 3.

For multiple-choice questions, the **one best** response to each question should be selected. For matching sets, a group of questions will be preceded by a list of lettered options. For each question in the matching set, select **one** lettered option that is **most** closely associated with the question. Each question in this book has a corresponding answer, a reference to a text that provides background to the answer, and a short discussion of various issues raised by the question and its answer. A listing of references for the entire book follows the last chapter.

To simulate the time constraints imposed by the qualifying examinations for which this book is intended as a practice guide, the student or physician should allot about 1 minute for each question. After answering all questions in a chapter, as much time as necessary should be spent in reviewing the explanations for each question at the end of the chapter. Attention should be given to all explanations, even if the examinee answered the question correctly. Those seeking more information on a subject should refer to the reference materials listed or to other standard texts in medicine.

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Pre- and Postoperative Care

Questions

1. A 48-year-old woman develops constipation postoperatively and self-medicates with Milk of Magnesia. She presents to clinic, at which time her serum electrolytes are checked, and she is noted to have an elevated serum magnesium level. Which of the following represents the earliest clinical indication of hypermagnesemia?
- Loss of deep tendon reflexes
 - Flaccid paralysis
 - Respiratory arrest
 - Hypotension
 - Stupor
2. Five days after an uneventful cholecystectomy, an asymptomatic middle-aged woman is found to have a serum sodium level of 125 mEq/L. Which of the following is the most appropriate management strategy for this patient?
- Administration of hypertonic saline solution
 - Restriction of free water
 - Plasma ultrafiltration
 - Hemodialysis
 - Aggressive diuresis with furosemide
3. A 50-year-old patient presents with symptomatic nephrolithiasis. He reports that he underwent a jejunioileal bypass for morbid obesity when he was 39. Which of the following is a complication of jejunioileal bypass?
- Pseudohyperparathyroidism
 - Hyperuric aciduria
 - Hungry bone syndrome
 - Hyperoxaluria
 - Sporadic unicameral bone cysts

2 Surgery (外科学)

4. Following surgery a patient develops oliguria. You believe the patient is hypovolemic, but you seek corroborative data before increasing intravenous fluids. Which of the following values supports the diagnosis of hypovolemia?

- a. Urine sodium of 28 mEq/L
- b. Urine chloride of 15 mEq/L
- c. Fractional excretion of sodium less than 1
- d. Urine/serum creatinine ratio of 20
- e. Urine osmolality of 350 mOsm/kg

5. A 45-year-old woman with Crohn disease and a small intestinal fistula develops tetany during the second week of parenteral nutrition. The laboratory findings include:

Na: 135 mEq/L
K: 3.2 mEq/L
Cl: 103 mEq/L
HCO₃: 25 mEq/L
Ca: 8.2 mEq/L
Mg: 1.2 mEq/L
PO₄: 2.4 mEq/L
Albumin: 2.4

An arterial blood gas sample reveals a pH of 7.42, PCO₂ of 38 mm Hg, and PO₂ of 84 mm Hg. Which of the following is the most likely cause of the patient's tetany?

- a. Hyperventilation
- b. Hypocalcemia
- c. Hypomagnesemia
- d. Essential fatty acid deficiency
- e. Focal seizure

6. A patient with a nonobstructing carcinoma of the sigmoid colon is being prepared for elective resection. Which of the following reduces the risk of postoperative infectious complications?

- a. A single preoperative parenteral dose of antibiotic effective against aerobes and anaerobes
- b. Avoidance of oral antibiotics to prevent emergence of *Clostridium difficile*
- c. Postoperative administration for 48 hours of parenteral antibiotics effective against aerobes and anaerobes
- d. Postoperative administration of parenteral antibiotics effective against aerobes and anaerobes until the patient's intravenous lines and all other drains are removed
- e. Redosing of antibiotics in the operating room if the case lasts for more than 2 hours

7. A 75-year-old man with a history of myocardial infarction 2 years ago, peripheral vascular disease with symptoms of claudication after half block, hypertension, and diabetes presents with a large ventral hernia. He wishes to have the hernia repaired. Which of the following is the most appropriate next step in his preoperative workup?

- a. A normal electrocardiogram (ECG) precludes the need for further cardiac testing.
- b. He should undergo an exercise stress test.
- c. He should undergo coronary artery bypass prior to operative repair of his ventral hernia.
- d. He should undergo a persantine thallium stress test and echocardiography.
- e. His history of a myocardial infarction within 3 years is prohibitive for elective surgery. No further testing is necessary.

8. A previously healthy 55-year-old man undergoes elective right hemicolectomy for a Stage I (T2N0M0) cancer of the cecum. His postoperative ileus is somewhat prolonged, and on the fifth postoperative day his nasogastric tube is still in place. Physical examination reveals diminished skin turgor, dry mucous membranes, and orthostatic hypotension. Pertinent laboratory values are as follows:

Arterial blood gases: pH 7.56, PCO_2 50 mm Hg, PO_2 85 mm Hg.

Serum electrolytes (mEq/L): Na^+ 132, K^+ 3.1, Cl^- 80; HCO_3^- 42.

Urine electrolytes (mEq/L): Na^+ 2, K^+ 5, Cl^- 6.

What is the patient's acid-base abnormality?

- a. Uncompensated metabolic alkalosis
- b. Respiratory acidosis with metabolic compensation
- c. Combined metabolic and respiratory alkalosis
- d. Metabolic alkalosis with respiratory compensation
- e. Mixed respiratory acidosis and respiratory alkalosis

9. A 52-year-old man with gastric outlet obstruction secondary to a duodenal ulcer presents with hypochloremic, hypokalemic metabolic alkalosis. Which of the following is the most appropriate therapy for this patient?

- a. Infusion of 0.9% NaCl with supplemental KCl until clinical signs of volume depletion are eliminated
- b. Infusion of isotonic (0.15 N) HCl via a central venous catheter
- c. Clamping the nasogastric tube to prevent further acid losses
- d. Administration of acetazolamide to promote renal excretion of bicarbonate
- e. Intubation and controlled hypoventilation on a volume-cycled ventilator to further increase PCO_2

10. A 23-year-old woman is brought to the emergency room from a halfway house, where she apparently swallowed a handful of pills. The patient complains of shortness of breath and tinnitus, but refuses to identify the pills she ingested. Pertinent laboratory values are as follows:

Arterial blood gases: pH 7.45, PCO_2 12 mm Hg, PO_2 126 mm Hg.
Serum electrolytes (mEq/L): Na^+ 138, K^+ 4.8, Cl^- 102, HCO_3^- 8.

An overdose of which of the following drugs would be most likely to cause the acid–base disturbance in this patient?

- a. Phenformin
- b. Aspirin
- c. Barbiturates
- d. Methanol
- e. Diazepam (Valium)

11. An 18-year-old previously healthy male is placed on intravenous heparin after having a pulmonary embolism (PE) after exploratory laparotomy for a small bowel injury following a motor vehicle collision. Five days later, his platelet count is $90,000/\mu\text{L}$ and continues to fall over the next several days. The patient's serum is positive for antibodies to the heparin-platelet factor complexes. Which of the following is the most appropriate next management step?

- a. Cessation of all anticoagulation therapy
- b. Cessation of heparin and immediate institution of high-dose warfarin therapy
- c. Cessation of heparin and institution of low-molecular-weight heparin
- d. Cessation of heparin and institution of lepirudin
- e. Cessation of heparin and transfusion with platelets

12. A 65-year-old man undergoes a technically difficult abdominal–perineal resection for a rectal cancer during which he receives three units of packed red blood cells. Four hours later, in the intensive care unit (ICU), he is bleeding heavily from his perineal wound. Emergency coagulation studies reveal normal prothrombin, partial thromboplastin, and bleeding times. The fibrin degradation products are not elevated, but the serum fibrinogen content is depressed and the platelet count is $70,000/\mu\text{L}$. Which of the following is the most likely cause of his bleeding?

- a. Delayed blood transfusion reaction
- b. Autoimmune fibrinolysis
- c. A bleeding blood vessel in the surgical field
- d. Factor VIII deficiency
- e. Hypothermic coagulopathy

13. A 78-year-old man with a history of coronary artery disease and an asymptomatic reducible inguinal hernia requests an elective hernia repair. Which of the following would be a valid reason for delaying the proposed surgery?

- a. Coronary artery bypass surgery 3 months earlier
- b. A history of cigarette smoking
- c. Jugular venous distension
- d. Hypertension
- e. Hyperlipidemia

14. A 68-year-old man is admitted to the coronary care unit with an acute myocardial infarction. His postinfarction course is marked by congestive heart failure and intermittent hypotension. On the fourth day in hospital, he develops severe midabdominal pain. On physical examination, blood pressure is 90/60 mm Hg and pulse is 110 beats per minute and regular; the abdomen is soft with mild generalized tenderness and distention. Bowel sounds are hypoactive; stool Hematest is positive. Which of the following is the most appropriate next step in this patient's management?

- a. Barium enema
- b. Upper gastrointestinal series
- c. Angiography
- d. Ultrasonography
- e. Celiotomy

15. A 30-year-old woman in her last trimester of pregnancy suddenly develops massive swelling of the left lower extremity. Which of the following would be the most appropriate workup and treatment at this time?

- a. Venography and heparin
- b. Duplex ultrasonography and heparin
- c. Duplex ultrasonography, heparin, and vena caval filter
- d. Duplex ultrasonography, heparin, warfarin (Coumadin)
- e. Impedance plethysmography, warfarin

16. A 20-year-old woman with a family history of von Willebrand disease is found to have an activated partial thromboplastin time (aPTT) of 78/32 (patient/control) on routine testing prior to cholecystectomy. Further investigation reveals a prothrombin time (PT) of 13/12, a platelet count of 350,000/mm³ and an abnormal bleeding time. Which of the following characteristics of this woman's coagulopathy is true?

- a. Infusion of purified factor VIII prior to surgery will correct her coagulopathy.
- b. Infusion of cryoprecipitate will not reduce blood loss in the perioperative period.
- c. Most of these patients are, or become, seropositive for human immunodeficiency virus (HIV).
- d. Epistaxis or menorrhagia is uncommon.
- e. Desmopressin (DDAVP) will reduce blood loss in the perioperative period.

17. A 65-year-old man undergoes a low anterior resection for rectal cancer. On the fifth day in hospital, his physical examination shows a temperature of 39°C (102°F), blood pressure of 150/90 mm Hg, pulse of 110 beats per minute and regular, and respiratory rate of 28 breaths per minute. A computed tomography (CT) scan of the abdomen reveals an abscess in the pelvis. Which of the following most accurately describes his present condition?

- a. Systemic inflammatory response syndrome (SIRS)
- b. Sepsis
- c. Severe sepsis
- d. Septic shock
- e. Severe septic shock

18. A victim of blunt abdominal trauma undergoes a partial hepatectomy. During surgery, he receives twelve units of packed red blood cells. In the recovery room, he is noted to be bleeding from intravenous puncture sites and the surgical incision. Which of the following statements regarding the coagulopathy is most likely true?

- a. The patient has an unknown primary bleeding disorder.
- b. The coagulopathy is secondary to the partial hepatectomy.
- c. The coagulopathy is secondary to dilutional thrombocytopenia and deficiency of clotting factors from the massive blood transfusion.
- d. The treatment is oral vitamin K.
- e. The treatment is intravenous vitamin K.

19. A 62-year-old woman undergoes a lysis of adhesions and bowel resection for small-bowel obstruction secondary to radiation enteritis after treatment for ovarian cancer. A jejunostomy is placed to facilitate nutritional repletion. Which of the following statements is true regarding postoperative nutrition?

- a. Enteral nutrition has no advantages over parenteral nutrition in postoperative patients.
- b. Institution of enteral feeding within 24 hours postoperatively is safe.
- c. Institution of enteral feeding should be delayed until bowel function returns as evidenced by passage of flatus or a bowel movement.
- d. Parenteral nutrition should be instituted immediately postoperatively and continued until enteral feeds have been initiated.
- e. Return of gastric motility postoperatively occurs before return of small-bowel motility.

20. A 65-year-old woman has a life-threatening pulmonary embolus 5 days following removal of a uterine malignancy. She is immediately heparinized and maintained in good therapeutic range for the next 3 days, then passes gross blood from her vagina and develops tachycardia, hypotension, and oliguria. Following resuscitation, an abdominal CT scan reveals a major retroperitoneal hematoma. Which of the following is the best next step in management?

- a. Immediately reverse heparin by a calculated dose of protamine and place a vena caval filter (eg, a Greenfield filter).
- b. Reverse heparin with protamine, explore and evacuate the hematoma, and ligate the vena cava below the renal veins.
- c. Switch to low-dose heparin.
- d. Stop heparin and observe closely.
- e. Stop heparin, give fresh-frozen plasma (FFP), and begin warfarin therapy.

21. A 71-year-old man develops dysphagia for both solids and liquids and weight loss of 60-lb over the past 6 months. He undergoes endoscopy, demonstrating a distal esophageal lesion, and biopsies are consistent with squamous cell carcinoma. He is scheduled for neoadjuvant chemoradiation followed by an esophagectomy and preoperatively is started on total parenteral nutrition, given his severe malnutrition reflected by an albumin of less than 1. Which of the following is most likely to be a concern initially in starting total parenteral nutrition in this patient?

- a. Hyperkalemia
- b. Hypermagnesemia
- c. Hypoglycemia
- d. Hypophosphatemia
- e. Hypochloremia