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POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (ANAESTHESIOLOGY) FINAL EXAMINATION – AUGUST 2016

Date :- 4th August 2016

Time :- 1.00 p.m. – 4.00 p.m.

LONG ESSAY QUESTIONS

Answer any **three** questions.

Answer each question **in a separate book.**

1. A 30 year old previously healthy P₂ C₁ mother at the 32nd week of gestation is admitted to the casualty ward with a history of dribbling for 3 days. She complains of difficulty in breathing. She is febrile and is found to have a heart rate of 120 beats per minute and a blood pressure of 90/50 mmHg.
 - 1.1. What are the possible causes? (10%)
 - 1.2. Describe your initial management of this patient in the first hour following admission. (20%)
 - 1.3. How would you arrive at a definitive diagnosis? (15%)
 - 1.4. If the patient goes into spontaneous labour, what are your concerns? (30%)
 - 1.5. She develops a major haemorrhage soon after vaginal delivery. How could this be optimally managed? (25%)
2.
 - 2.1. What are the clinical indications for cardiac output monitoring? (30%)
 - 2.2. Discuss the different methods available for cardiac output monitoring including its physical principle. (70%)

Contd...../2-

3. A 70 year old patient is admitted to the emergency department with a history of acute onset abdominal pain radiating to the back and dizziness. He is known to have an 8 cm infra renal abdominal aortic aneurysm and has defaulted admission for elective surgery. You are requested to assess this patient with a view for open repair of the aneurysm.
- 3.1. What factors contraindicate open repair of a leaking abdominal aortic aneurysm? (10%)
 - 3.2. Briefly describe the pre-operative assessment and management of this patient. (20%)
 - 3.3. Describe your intraoperative management of this patient. (40%)
 - 3.4. Outline the post-operative management. (15%)
 - 3.5. List the possible post-operative complications this patient could develop. (15%)
4. A 16 year old girl is scheduled to undergo scoliosis correction surgery.
- 4.1. Explain which specific preoperative considerations are relevant to this patient. (40%)
 - 4.2. What methods are available to monitor spinal cord function intra operatively? Indicate the limitations of each of the methods. (20%)
 - 4.3. Describe the other important aspects in the intra operative anaesthetic management of this patient. (30%)
 - 4.4. List the post operative problems you may anticipate. (10%)

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MD (ANAESTHESIOLOGY) FINAL EXAMINATION – AUGUST 2016

Date :- 5th August 2016

Time :- 1.00 p.m. – 4.00 p.m.

Short Answer Questions

Candidates are required to answer **all twelve** questions.

Candidates who fail to attempt any **one** question will not pass the examination.

All questions carry equal marks

Answer each part in a separate book marked **A** and **B**.

PART A

1.
 - 1.1. Outline the mechanisms that control the arterial blood pressure. (60%)
 - 1.2. Explain how the cardiovascular parameters regulating blood pressure can be influenced by antihypertensives. Give examples. (40%)
2. A 3 year old child is awaiting squint correction.
 - 2.1. What are the preoperative problems of concern in this child? (50%)
 - 2.2. During surgical traction the patient develops sinus bradycardia. Explain the mechanism. How would you manage? (20%)
 - 2.3. List the post operative problems and how you would prevent them. (30%)
3. A 35 year old patient had a laparoscopic cholecystectomy three weeks ago. He has got readmitted. He is acutely ill and is suspected to have a bile leak. You are requested to transfer him from the ward for a Magnetic Resonance Cholangio Pancreatography (MRCP), to the radiology unit of the hospital.
 - 3.1. How do you prepare this patient prior to the transfer? (50%)
 - 3.2. What are your organizational concerns for this transfer? (50%)

Contd..../2-

4. A 42 year old primi with a POA of 34 weeks and a BMI of 35kg/m^2 is admitted to the hospital complaining of severe pain and swelling of her left leg. On examination she is afebrile, has a swollen warm left leg and the distal pulses are felt.

- 4.1. What is the most likely diagnosis? (5%)
- 4.2. How will you investigate her to confirm your diagnosis? (15%)
- 4.3. How will you manage her in the first 24 hours? (40%)
- 4.4. She is scheduled for an elective caesarean section at 38 weeks and requests a spinal anaesthetic. Outline your management of anticoagulation during this perioperative period. (40%)

5. A 35 year old patient diagnosed with Phaeochromocytoma was referred to the pre anaesthetic clinic for evaluation prior to adrenalectomy.

- 5.1. List the methods available to confirm the diagnosis. (15%)
- 5.2. Briefly describe the objectives of pre operative preparation of this patient. (50%)
- 5.3. Outline the aims of intra operative anaesthetic management. (35%)

6.

- 6.1. Outline the potential benefits of percutaneous tracheostomy over conventional surgical tracheostomy. (20%)
- 6.2. How would you prepare a patient for percutaneous tracheostomy? (55%)
- 6.3. What anatomical factors would indicate a potentially difficult percutaneous tracheostomy? (25%)

PART B

7. You have planned a clinical trial to see the difference in blood pressure readings when the cuff is applied to the upper arm and the wrist.
- 7.1. Outline step by step how you would plan this clinical trial. (50%)
 - 7.2. Briefly describe type 1 error and type 11 error in a clinical study. (30%)
 - 7.3. When would you accept the study as statistically and clinically significant? (20%)
- 8.
- 8.1. Briefly outline the preoperative considerations of a patient with acromegaly admitted for excision of a pituitary adenoma. (50%)
 - 8.2. List the post operative complications. (10%)
 - 8.3. Outline the management of the listed complications. (40%)
9. A 72 year old male is in the ICU following a Coronary Artery Bypass Grafting (CABG). Six hours later he becomes haemodynamically unstable. His blood pressure drops to 80/60 (MAP 66) mmHg with a heart rate of 124 beats/minute.
- 9.1. List five (05) possible reasons for this. (15%)
 - 9.2. Briefly state how you would diagnose each of the above conditions that are mentioned. (40%)
 - 9.3. Outline your immediate management of each condition. (45%)
- 10.
- 10.1. Describe the anatomy of the thoracic paravertebral space. (40%)
 - 10.2. How do you perform a paravertebral block under ultrasound guidance? (60%)

11.A 56 year old diabetic complains of pain in the leg following a right sided below knee amputation.

11.1. On what basis would you diagnose phantom limb pain? (30%)

11.2. What are the other types of pain he could develop? (10%)

11.3. What are the risk factors for his phantom pain? (20%)

11.4. Briefly describe the pathophysiology of phantom limb pain. (30%)

11.5. List the pharmacological agents used in the management. (10%)

12.

12.1. What are the main functions of the placenta? (30%)

12.2. How do drugs transfer across the placenta? (15%)

Give examples. (15%)

12.3. Outline how induction agents, neuromuscular blocking drugs, volatile anaesthetic agents and opioids cross the placenta. (40%)