


<p>Tanta university Faculty of Medicine Anesthesia , SICU & pain Medicine</p> <p>Date 22 /11/2020</p>	<p>Exam : MS Degree 2nd Part Paper 2 SICU& Pain Medicine No. of Questions: 6 Questions Times allowed : 3 hours Marks : 270 marks</p>	
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Q1- Male patient 67 years, 60 Kg had fracture femur, fracture pelvis and rim of intraperitoneal free fluids after being stable for 4 day developed sudden cardiac arrest in asystole. After 2 successful cycles of CPR, ABP 100/60 mmHg, HR 130 b/min, SpO₂ 93% on 100% FiO₂ CVP 5 CmH₂O , UOP 50 ml in the last 4 hrs pH 7.11, PaCO₂ 25 mmHg , HCO₃ 12 mmol PaO₂ 55 mmHg Na 160 mmol/l Cl 118 mmol/l , K 3.9 mmol/L

- A. Discuss mechanism of blood flow during cardiopulmonary resuscitation? (10marks)
- B. Classify and explain patient ABGs? (15marks)
- C. Mention electrolyte disturbance in this patient and its management? (10marks)
- D. State the most probable diagnosis of patient deterioration? (10marks)

Q2- A 45 years female admitted to ER after falling from height , GCS 6 , CT finding showed extramural hematoma , brain oedema , cervical fracture at C5 in ER patient vomited , aspirated, intubated and mechanically ventilated After evacuation of extramural hematoma patient admitted to SICU. On connection to ICU ventilator high peak airway pressure alarm sounds.

- A) What is the differential diagnosis and management of high peak airway pressure? (15marks)
- B) Discuss how to improve cerebral perfusion in this patient? (10marks)
- C) Outline management of spinal cord injury at C5 level? (10marks)
- D) Mention variation in triggering and cycling with different modes of ventilation? (10marks)

Q3-85 years old male patient known to be diabetic and hypertensive presented to the emergency department with severe diffuse abdominal pain, he had a history of nausea and mild abdominal pain in the last 3 days. Examination of the patients revealed that he is drowsy, temperature 38.5 o C, rapid shallow breathing with respiratory rate 28 cycle/min, oxygen saturation 95%, pulse rate 130 b/min, blood pressure 80/50 mmHg. Arterial blood gases on room air revealed: - PH= 7.21, Pao₂= 82 mmHg, Paco₂ = 23 mmHg, Hco₃= 10 mmol/L. Plasma electrolytes; Na 139 mEq/L, K 5. 3mEq/L, Cl 104 mEq/L, total co₂ 12 mEq/L. Plain erect X-Ray of the abdomen revealed multiple free fluid level and abdominal ultrasonography revealed moderate intraperitoneal free fluid for urgent laparotomy.

- A) What is your provisional diagnosis? Explain? (9marks)
- B) What is the differential diagnosis? (9marks)
- C) Interpret the ABG. (9marks)
- D) Discuss the initial management of such patient. (9marks)
- E) Discuss how to diagnose the organ dysfunction in critically ill patients. (9marks)

Q4- Male patients known to be hypertensive, diabetic, with IHD admitted to the operating room for performing internal fixation of fractured neck femur under spinal anesthesia. At the end of the surgery, the patients developed sudden cardiac arrest in the form of asystole. Cardiopulmonary resuscitation was started with administration of a mg adrenaline i.v. The patients had return of spontaneous circulation within 4 minutes, intubated, and you are consulted for managing him after ROSC. On arrival, the patient was intubated and relaxed, heart rate 130 b/min, blood pressure 110/50 on noradrenaline 0.05 ug/kg, oxygen saturation was 96% on 0.8 FiO₂, Et CO₂ was 32 mm Hg on mechanical ventilation (controlled mode, Vt: 6 ml/kg, RR: 12 /min, and PEEP; 5 CmH₂O)

- A) What are your goals on managing this patient? (5marks)
- B) What is the post-resuscitation care? (5marks)
- C) Can you transfer him to the ICU? (3marks)
- D) What are the investigations to be requested? (5marks)
- E) What is the postcardiac arrest syndrome? And what are its components? (10marks)
- F) How to manage the post cardiac arrest syndrome? (7marks)
- G) Can hypothermia be beneficial in such patient? Explain (10marks)

Q5- Management of acute postoperative pain was announced as one of human right

- A) Define postoperative pain. (15marks)
- B) Describe pathogenesis of acute postoperative pain and transmission from acute pain to chronic (15marks)
- C) Design protocol for multimodal analgesia explaining its concept (15marks)

Q6- Flail chest is displaced rib fractures associated with intractable pain *flail chest* segment (3 or more consecutive ribs with segmental

- A) What is the importance of management of acute pain in such case? (20marks)
- B) What are the current treatment options and their associated problems? (25marks)

GOOD LUCK