


<p><b>Tanta University</b></p> <p><b>Faculty of Medicine</b></p> <p><b>Anesthesia, SCC &amp; Pain Medicine Dep.</b></p> <p><b>Date: 25 / 11 / 2020</b></p>	<p><b>Exam : MD – 3<sup>rd</sup> Paper - (Pain Medicine)</b></p> <p><b>No. of Questions:</b></p> <p><b>1 Long Answer Question (LAQ)</b></p> <p><b>2 Short Answer Questions (SAQs)</b></p> <p><b>8 Single Best Answer Questions (SBAQs)</b></p> <p><b>16 Multiple Choice Questions (MCQs)</b></p> <p><b>Times allowed : 2 Hours</b></p> <p><b>Marks: 80x1 Mark / LAQ</b></p> <p><b>20x2 Mark / SAQ</b></p> <p><b>6 x 8 Mark / SBAQ</b></p> <p><b>2 x 16 Mark / MCQ</b></p> <p><b>Total → 200 marks</b></p>	
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**Long Answer Question (LAQ)**

**A 42-year-old lady presents to pain clinic complaining of depression and difficulty to use her right arm with inability to wear long-sleeved shirts, because of pain to touch. She gives history of fell on her right arm while at work 1 year ago, followed 10 days later with severe burning pain from the palm to the mid-forearm. The arm began to swell with alternating change of color, pale and red.**

- A. What is the most likely diagnosis? Justify your answer? (20 marks)
- B. How do you confirm the diagnosis? (10 marks)
- C. Outline the pathophysiologic theories regarding the etiology of her diagnosis? (10 marks)
- D. Delineate the different stages of that diagnosis? (10 marks)
- E. Discuss the different modalities available for her treatment? (10 marks)
- F. What are the clinical implications of inadequate postoperative analgesia? (10 marks)
- G. Briefly outline a protocol of a study investigating the efficiency of a new analgesic drug in patients with chronic pain? (10 marks)

**Short Answer Questions (SAQs)**

**Q1. A 57-year-old man presented to pain clinic complaining of epigastric pain radiating to the back. His sclerae are mildly icteric. MRI show a mass at the head of the pancreas.**

- A. What are the different causes of pain in patients with cancer? (4 marks)
- B. What is breakthrough pain, and how is it treated? (6 marks)
- C. How is a celiac plexus block performed, and what complications can occur? (10 marks)

**Q2. Low back pain with or without radiculopathy is the most common cause for pain clinic visit.**

- A. Differentiate the clinical presentation of a patient with a herniated nucleus pulposus from a patient with spinal stenosis (10 marks)
- B. What are the signs and symptoms of sacroiliac disease, and how is it treated? (10 marks)

**Single Best Answer Questions (SBAQs)**

**1. A previously healthy adult male patient undergoing right forearm orthopedic surgery under an axillary block. Twelve minutes after injection of 30 ml marcaïne 0.5%, he developed fits and V.F cardiac arrest. Which of the following measures is not indicated?**

- A. Ventilate with 100% oxygen.
- B. Starts CPR at chest compression rate of 100 per minute.

- C. Give single bolus dose of propofol to bind marcaine.
- D. Give bolus dose of intralipid 20%, followed by infusion.
- E. Repeat the bolus dose of intralipid 20%, if V.F continues.

2. A 50-year-old woman presents to pain clinic with a three-year history of low back pain with occasional radiation down the left leg. The severity and impact on her functional ability is increasing and her general practitioner feels he has explored all the options open to him. Careful history-taking eliminates the 'red flags' of chronic back pain. Which one of the following options is not a 'yellow flag' of chronic back pain?

- A. A negative attitude that back pain is harmful or potentially severely disabling
- B. Fear avoidance behavior and reduced activity levels
- C. An expectation that passive, rather than active, treatment will be beneficial
- D. A comorbid psychiatric diagnosis or history of substance misuse
- E. A tendency to depression, low morale and social withdrawal

3. A 63-year-old female presents to pain clinic with a 10-week history of severe pain in her left eye. The pain is continuous and is associated with a burning sensation. She also had a skin rash in the painful area which began after a week of onset of the pain. She gives history of multiple intermittent courses of steroid medication. Which of the following is the most likely cause of her pain?

- A. Trigeminal neuralgia.
- B. Atypical facial pain.
- C. Atypical presentation of trigeminal neuralgia.
- D. Late signs and symptoms of polymyalgia rheumatica.
- E. Post-herpetic neuralgia

4. A 58-year-old man presents to pain clinic with pain in the left side of chest wall. He has a past history of a very painful rash about 5 months ago. He states that the pain persists since that time. Which of the following is the best option for him?

- A. Simple analgesic and TENS.
- B. NSAID and TENS.
- C. Weak opioid and TENS.
- D. Simple analgesic, gabapentin and/or tricyclic antidepressant.
- E. Potent opioid and TENS.

5. A 42-year-old woman has been diagnosed with untreatable carcinoma of the cervix and has severe pain. She is taking MST 60 mg twice daily, gabapentin 300mg twice daily, paracetamol 1 g four times daily, and clonazepam 6 mg daily. Frequent break through pain is treated by fentanyl patch 50 mcg / h. The doses of opioid medication required to alleviate pain have doubled in the last 2 months. Following palliative surgery she is now incontinent. Her life expectancy is about 3-6 months. Which of the followings is the next best possible intervention for the management of her uncontrollable pain in the perineum area?

- A. Radiofrequency lesioning of the lumbar sympathetic nerves.
- B. Coeliac plexus block using a neurolytic solution.
- C. Intrathecal saddle neurolytic block.
- D. Intrathecal drug delivery of morphine.
- E. Lumbar chemical sympathectomy using a neurolytic solution.

6. A 64-year-old woman with history of congestive heart failure, presents with pain in the distribution of the trigeminal nerve, repeated vomiting, blurred vision, and dysesthesia in her feet. Currently, she is on digoxin and thiazide. Which of the followings is the most appropriate intervention for her?

- A. Neurological consultation to exclude multiple sclerosis.
- B. Check digoxin level.
- C. Initiate therapy with carbamazepine.
- D. Give fentanyl as a narcotic and ondansetron as an antiemetic.
- E. Trigeminal nerve block with lidocaine as a diagnostic block.

7. A 32-year-old male who is a known heroin addict, is on the trauma list for open reduction and internal fixation of a fracture of his humerus. He has been abusing heroin for the last 3 years. He is very anxious about postoperative pain relief and the surgeon is concerned about compartment syndrome in the postoperative period. Which of the following is the best choice for postoperative pain relief?

- A. Multimodal analgesia with 'PRN' morphine.
- B. Multimodal analgesia with an additional infraclavicular brachial plexus block using 20ml of 0.25% bupivacaine.
- C. Multimodal analgesia with a morphine PCA.
- D. Multimodal analgesia with an intravenous infusion of morphine.
- E. Fentanyl patch with an initial dose of 50 mcg/hr.

8. A patient presents to pain clinic with a two-month history of severe pain in the right forearm. Which of the following features is least consistent with a diagnosis of a complex regional pain syndrome type?

- A. Pain that is in an ulnar nerve distribution
- B. A history of a fractured ulna occurring 24 months previously that required reduction and immobilization
- C. Worsening of the pain when the arm is placed in a dependent position
- D. Loss of hair on the right forearm but preservation of hair on the left forearm
- E. The presence of a tremor in the right arm

#### Multiple Choice Questions (MCQs)

1. Which of the following is consistent with definition of allodynia?

- A. Pain secondary to a primary lesion in the nervous system.
- B. An increased response to a painful stimulus.
- C. Pain provoked by non-painful stimulus.
- D. A decreased response to a painful stimulus.

2. All of the following are side effects of intrathecal morphine except:

- A. Hypotension.
- B. Nausea and vomiting.
- C. Pruritus.
- D. Respiratory depression.

3. Concerning practice standards, all of the following are true except:

- A. Standards are rules or minimum requirements for clinical practice.

- B. Standards of anesthesia practice are the same in both developed and developing countries.
- C. Standards should not be modified under any circumstances.
- D. Standards may be modified under unusual circumstances.

4. Signs of complex regional pain syndrome may include all of the following except:

- A. Pain of short duration
- B. Coldness
- C. Hyperesthesia
- D. Brittle nail

5. Nonsteroidal anti-inflammatory drugs (NSAIDs) are often used as part of “multimodal” analgesic therapy; some of the potential advantages include all of the following, except:

- A. Decreases opioid requirements
- B. Can decrease postoperative pain intensity
- C. Indirect effect of decreasing opioid-related side effects
- D. Can improve wound healing

6. Major excitatory neurotransmitters responsible for pain modulation include all the following, except:

- A. Substance P
- B. Glutamate
- C. Somatostatin
- D. Aspartate

7. The diagnosis of fibromyalgia includes all of the following, except:

- A. Minor pain
- B. Pain lasts more than 3 months
- C. No other pathologies can explain or contribute to the pain
- D. Frequent association with psychiatric diagnosis

8. The correct order for lipid solubility of the following opioids is:

- A. Morphine > fentanyl > sufentanil > alfentanil.
- B. Morphine > alfentanil > sufentanil > fentanyl.
- C. Sufentanil > alfentanil > fentanyl > morphine.
- D. Sufentanil > fentanyl > alfentanil > morphine.

9. Regarding pruritus associated with opioids, all of the following are true, except:

- A. Is relieved by ondansetron.
- B. Is necessary histamine-related.
- C. Is  $\mu$ -receptor-mediated.
- D. Is reversible with naloxone.

10. Which of the followings describe the most common location of herniated disc of the lumbar spine region?

- A. Lumbar 1-2
- B. Lumbar 4-5
- C. Lumbar 3-4

**D. Lumbar 2-3**

- 11. Which of the followings, mean the number needed to treat of a new analgesic is 8?**
- A. From every 8 patients treated with the new analgesic, one patient shows effective pain relief.**
  - B. From every 8 patients treated with the new analgesic, 1 patient shows no pain relief.**
  - C. From every 10 patients treated with the new analgesic, 8 patients show effective pain relief.**
  - D. From every 10 patients treated with the new analgesic, 8 patients show no pain relief.**
- 12. Which of the following is an example of a central pain state?**
- A. Bone fracture pain**
  - B. Gallbladder pain.**
  - C. Postoperative incision pain**
  - D. Phantom limb pain**
- 13. All of the following drugs are useful in the treatment of postoperative pain in a cancer patient who was on slow release morphine preoperatively, except:**
- A. Pethidine**
  - B. Butorphanol**
  - C. Morphine**
  - D. Fentanyl**
- 14. Which of the following is the most specific with immediate treatment of nausea and vomiting secondary to epidural morphine?**
- A. Droperidol 0.625 mg intravenous**
  - B. Scopolamine transdermal patch**
  - C. Naloxone 5 mcg/kg/h intravenous**
  - D. Promethazine 5 mg intravenous increments**
- 15. Which of the following pathways is involved in the transmission of pain?**
- A. Corticobulbar tract**
  - B. Corticospinal tract**
  - C. Lateral spinothalamic tract**
  - D. Dorsal columns**
- 16. A medial branch block is often performed in the diagnosis of facet joint pain in the spine. The medial branch is the mainly sensory component of which branch of a spinal nerve?**
- A. dorsal ramus**
  - B. ventral ramus**
  - C. rami communicantes**
  - D. dorsal root ganglion**

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**GOOD LUCK**