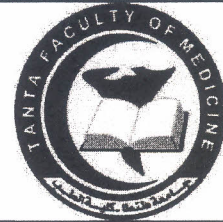


Tanta University
Faculty of Medicine
Neurosurgery Department

October, 30th, 2021

MSNeurosurgery
(4 questions; 180 marks)
Time Allowed: Three Hours

Paper I



1. Strategy for management of intracranial arachnoid cyst [45 marks]
2. Incidental durotomy during lumbar spine surgery; management [45 marks]
3. ICU management of Traumatic Brain Injury [45 marks]
4. Fusion for degenerative diseases of the lumbar spine: indications, risks and avoidance [45 marks]

Pharmacology Exam for MSc in Neurosurgery

Tanta University

Pharmacology Written Examination

Faculty of Medicine

Number of Questions: 4

Pharmacology Department

Time Allowed: 1 ½ Hour

Date: 19/8/2021

Total: 30 Marks



1-Give an account on (6 marks):

- a- Quinolones (mechanism of action, uses and contraindications).
- b-Thrombolytics (mode of action ,preparations ,indications and contraindications

2- Mention lines of treatment of the following cases (6marks)

- a- Hypertensive emergencies
- b- Trigeminal neuralgia.

3- Give reason (3 marks):

- a-Warfarin therapy is associated with dermal vascular necrosis.
- b-Morphine should not be given in large doses in treatment of cardiogenic shock.

4-MCQs (15 marks):

1-What is the reason of complicated penetration of some drugs through brain-blood barrier?

- a) High lipid solubility of a drug
- b) Meningitis
- c) Absence of pores in the brain capillary endothelium
- d) High endocytosis degree in a brain capillary.

2- Stimulation of liver microsomal enzymes can:

- a) Require the dose increase of some drugs
- b) Require the dose decrease of some drugs
- c) Prolong the duration of the action of a drug
- d) Intensify the unwanted reaction of a drug.

Pharmacology Exam for MSc in Neurosurgery

3-An antagonist is a substance that:

- a) Binds to the receptors and initiates changes in cell function, producing maximal effect
- b) Binds to the receptors and initiates changes in cell function, producing submaximal effect
- c) Interacts with plasma proteins and doesn't produce any effect
- d) Binds to the receptors without directly altering their functions

4-Compared with epinephrine, norepinephrine produces all of the following effects EXCEPT:

- a) Similar effects on beta1 receptors in the heart and similar potency at an alfa receptor
- b) Decrease the mean pressure below normal before returning to the control value
- c) Significant tissue necrosis if injected subcutaneously
- d) Increase both diastolic and systolic blood pressure.

5-Which of the following antiseizure drugs produces enhancement of GABA-mediated inhibition?

- a) Ethosuximide
- b) Carbamazepine
- c) Phenobarbital
- d) Lamotrigine.

6-Chemical mediators in the nociceptive pathway are all of the following EXCEPT:

- a) Enkephalins
- b) Kinins
- c) Prostaglandins
- d) Substance P

7-Select the narcotic analgesic, which is an antagonist or partial mu receptor agonist:

- a) Fentanyl
- b) Pentazocine
- c) Codeine
- d) Methadone.

8-Which of the following opioid analgesics is used in combination with droperidol in neuroleptanalgesia?

- a) Morphine
- b) Buprenorphine
- c) Fentanyl
- d) Morphine.

Pharmacology Exam for MSc in Neurosurgery

9-Indicate the mechanism of hypnotic benzodiazepine action:

- a) Increasing the duration of the GABA-gated Cl⁻ channel openings
- b) Directly activating the chloride channels
- c) Increasing the frequency of Cl⁻ channel opening events
- d) All of the above.

10-Characteristics of nootropics include all of the following EXCEPT:

- a) Selective influence on the brain
- b) Improvement the ability to communicate with peers
- c) Decline in the highest integrative brain functions
- d) Increase in energetic exchange of the brain cells.

11- All of the following drugs are indirect acting anticoagulants EXCEPT:

- a) Dicumarol
- b) Warfarin
- c) Dalteparin
- d) Phenindione

12-Which of the following drugs is an inhibitor of platelet glycoprotein IIb/IIIa receptors?

- a) Aspirin
- b) Clopidogrel
- c) Ticlopidine
- d) Abciximab.

13-In patient of head injuries with rapidly increasing intracranial tension without haematoma, the drug of choice for initial management would be :

- a)Furosemide.
- b)Steroids.
- c)20%Mannitol.
- d)Glycine.

14-patient has been diagnosed to have brain tumour. you would prefer to give him betamethasone/dexamethasone over hydrocortisone as steroids to decrease his cerebral edema because :

- a)They do not cause Na⁺ and water retention.
- b)They are more potent .
- c)They can be administered intravenously.
- d)They inhibit brain tumours.

Pharmacology Exam for MSc in Neurosurgery

15-A 62-year-old man with a herniated lumbar disc at L4 is undergoing spinal surgery to remove the injured disc. During the procedure, propofol is administered intravenously. Which of the following statements about this agent is true?

- a-Increase blood pressure.
- b-Myocardial depression.]
- c-Reduce intracranial pressure.
- d-systemic vasoconstriction

**Oral exam at 28/8/2021` at 9 am in pharmacology
department**



Department of physiology
Time allowed: Three hours
Total marks: 30

Physiology
MSC of Neurosurgery

Tanta University
Faculty of Medicine
Code: NEUROS 8002
Date: 19 /8/ 2021

All the questions must be answered:

1. State : Functions of thalamus. (5 marks)
2. Mention : Causes of headache. (5 marks)
3. State : Functions of vestibulocerebellum. (5 marks)

All the following must be answered by only one choice (15 marks)

1. Which of the following is function of insulin:
 - a. Stimulate lipolysis.
 - b. Promote protein catabolism.
 - c. Promote protein anabolism.
 - d. Increase blood potassium level.
2. Hemophilia is characterized by :
 - a. Prolonged bleeding time.
 - b. Decrease number of platelets.
 - c. Prolonged coagulation time.
 - d. Abnormal platelet function .
3. Which of the following contain muscarinic receptors:
 - a. Adrenal medulla.
 - b. Autonomic ganglia.
 - c. Eccrine sweat gland
 - d. Motor end plate.
4. Stimulation to beta 2 adrenergic receptors induce :
 - a. Bronchoconstriction.
 - b. Increase gastric secretion .
 - c. Coronary vasodilatation
 - d. pupil constriction.
5. Cyanotic threshold normally equal:
 - a. 5 gm % arterial blood.
 - b. 5 gm % capillary blood.
 - c. 5 mg % arterial blood.
 - d. 5 mg % capillary blood.
6. Visceral pain is characterized by:
 - a. Never referred.
 - b. Rigidity of overlying skeletal muscle.
 - c. Well localized
 - d. Induce flexion withdrawal reflex.
7. Venous return is decreased by:
 - a. Vasodilatation of arterioles.
 - b. Venodilatation.
 - c. Increase negative intrapleural pressure.
 - d. Venoconstriction

Look to back

- 8- Which of the following induced by stimulation of alpha 1 adrenergic receptors :
- Increase heart rate .
 - Bronchoconstriction.
 - Vasoconstriction to blood vessels.
 - Bronchodilatation.
- 9- Which of the following could stimulate aldosterone secretion:
- Hypervolemia.
 - Hypoproteinemia.
 - Increase blood potassium level.
 - Decrease blood potassium level.
- 10- Which of the following is function of heparin :
- Antiprothrombin.
 - Activate prothrombin.
 - Inhibit activity of platelets.
 - Inhibit activity of vitamin K.
- 11- Which of the following could increase capillary permeability:
- Acidity of blood.
 - Alkalinity of blood.
 - Increase plasma protein level.
 - Increase blood calcium level.
- 12- Increase arterial blood pressure could induce which of the following.
- Increase end diastolic volume.
 - Increase heart rate.
 - Increase secretion of aldosterone.
 - Increase secretion of antidiuretic hormone.
- 13- Which of the following could increase peripheral vascular resistance :
- Anemia.
 - Vasodilatation of arterioles.
 - Increase heart rate.
 - Increase blood viscosity.
- 14- Which of the following could induce metabolic acidosis:
- Restrictive lung disease.
 - Hyperventilation.
 - Hypoventilation.
 - Renal failure.
- 15- Which of the following is CORRECT as regard blood PH:
- Inversely proportionate with arterial HCO_3 .
 - Directly proportionate with arterial PCO_2 .
 - Normally equal 7.1 for arterial blood.
 - Directly proportionate with arterial HCO_3 .



Tanta Faculty of Medicine

Department of General Surgery

Master of Neurosurgery (لائحة 2013)

General Surgery Examination - August 2021

Time: 3 hours

Total marks: 60

All questions should be answered

1-Primary survey of the polytraumatized patient? (20 Marks)

2-Causes, clinical picture and treatment of thoracic outlet syndrome?
(20 marks)

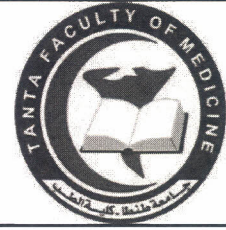
3-Clinical picture and management of compartment syndrome of the lower limb?
(20 marks)

Good Luck

الإمتحان الشفوي والإكلينيكي بقسم الجراحة العامة بالمستشفى التعليمي الفرنيساوي الدور السابع
يوم الأربعاء ١ سبتمبر الساعة الثامنة صباحا

Tanta University
Faculty of Medicine
Neurosurgery Department

MS Neurosurgery
(4 essay questions; 180 marks)
Time Allowed: Three Hours



November, 2th, 2021

Paper II

1. Spinal cord injury: classifications, management guidelines. [45 marks]
2. Perioperative management guidelines for patients with neuroimaging suggestive of a malignant intracranial neoplasm [45 marks]
3. Hand muscle wasting: differential diagnosis and management [45 marks]
4. Deep venous thrombosis in neurosurgical practice: risk factors, management and avoidance [45 marks]



**Master Degree
Neurosurgery written examination –
October, 2021**

**Tanta University
Faculty of Medicine
Department of Neuropsychiatry**

All questions should be answered
Number of questions: 4
Time allowed: Three hours

Answer the following questions

1. Differential diagnosis and management of dystonia (20%)
2. Management of remitting relapsing Multiple sclerosis (20%).
3. Classifications and diagnosis of epileptic seizures (20%)
4. Primary headaches: types and management (20%).
5. Complications of subarachnoid hemorrhage and their management (20%).

Good Luck