Al-Azhar university Gaza
Faculty of Pharmacy
Dept. of pharmacology and medical sciences

Pharmacology III Mid-term Exam
Year 2014-2015
Fifth year

Date: 11/11/2014
Time: 120 minutes
Total marks: 50

Students Name: .....

Part I: Multiple Choice Questions. Choose the best correct answer: (30 Marks)

1. which one of the following statements concerning proposed mechanisms of action of antiepileptic drugs is False?

a. Diazepam facilitates GABA-mediated inhibitory actions.

b. Phenobarbital has mutiple actions, including enhancement of the effects of GABA, antagonism of glutamate receptors, and blockade of Na^+ ion channels.

c. Phenytoin prolongs the inactivated state of the . Na^+ ion channel.

d. Gabapentin enhances GABA actions.

e. Carbamazepine blocks Na^+ ion channels .

2. Which of the following antiepileptic drugs is MOST LIKELY to elevate the plasma concentration of other drugs administered concomitantly?

a. Carbamazepine.

b. Diazepam.

c. Phenobarbital.

d. Phenytoin.

e. Valproic acid.

3. Which of the following statements concerning the pharmacokinetics of antiepileptic drugs is ACCURATE?

a. At high doses, phenytoin elimination follows first-order kinetics.

b. Valproic acid may increase the activity of hepatic alanine synthase and the synthesis of porphyrin.

c. Carbamazepine induces its own metabolism and has inactive metabolites.

d. The administration of phenytoin to patients in methadone maintenance programs has led to symptoms of opioid overdose, including respiratory depression.

e. The half-life of lamotrigine is decreased by co-administration of carbamazepine.

4. Which of the following statement about therapeutic uses of antiepileptic drugs is ACCURATE?

a. Carbamazepine is used for the treatment of generalized tonic-clonic seizures in elderly people..

b. Gabapentin is considered a primary drug for the treatment of.partial seizures and for the treatment of postherpetic neuralgia.

c. Lamotrigine is effective in a wide variety of seizure types, and in bipolar disorders.

9. Which one of the following statements about nalbufine is ACCURATE?

a. Has antagonist action at Kappa receptors.

b. Can cause respiratory depression.

c. Is a nonsedating.

d. Its tendency to cause psychotomimetic effects is more than that with pentazocine.

e. Response to naloxone in overdose may be unreliable.

10. This drug which does not activate opioid receptors, has been proposed as a maintenance drug in treatment programs for opioid addicts; single oral dose will block the effects of injected heroin up to 48 hours

a. Buprenorphine.

b. Naloxone.

c. naltrexone.

d. Oxycodone .

e. None of the above.

11. fentanyl transdermal patches have been used postoperativelt to provide transdermal analgesia. The most dangerous disadvantage of this route of administration is

a. Cutaneous reaction.

b. Hypertension.

c. Severe diarrhea.

d. Relaxation of skeletal muscles.

e. Respiratory depression.

12. Which one of the following statements of opioids is ACCURATE?

a. Fentanyl has longer duration of action than morphine.

b. Sufentanil is less potent than fentanyl.

c. The higher- dosage forms of sustained-release formulation of oxycodone is used only in patients who are tolerant to opioids.

d. oral hydromorhone has the same analgesic potency as oral morphine.

e. Hydrocodone is a much stronger analgesic than hydromorphone.

13. Which one of the following hormones is not synthesized by the hypothalamus?

a. Corticotropin-releasing hormone.

b. Oxytocin.

c. Luteinizing hormone.

d. Thyrotropin-releasing hormone.

e. Vasopressin.

d. Phenytoin is less preferred for the treatment of partial, and primary generalized seizure in childb
women than valproic acid.

5. A 26-year-old woman develop a seizure disorder characterized by recurrent contractions of muscles in the right hands which can spread to the right arms and to the right side of the face. Consciousness is not impaired, and the attacks usually last for only a minute or two. If the wo taking oral combination contraceptives, which one of the following drugs is LEAST LIKELY in the treatment of this patient?

a. Carbamazepine.

b. Phenytoin.

c. Lamotrigine.

d. Topiramate.

6. A 9-year- old child i shaving learning difficulties at school. He has brief lapses of awarenes fluttering that occure every 5-10 minutes. ECG studies reveal brief 3-Hz spike and wave discha appearing synchronously in all leads. Which one of the following drugs would be effective in th

a. Diazepam.

b. Phenobarbital.

c. Carbamazepine.

d. Lamotrigine.

e. None of the above.

7. A patient injured in an auto accident recieved an intramuscular injection of meperidine. He subsequently developed a severe reaction characterized by hyperpyrexia and seizures. When qu his wife revealed that the patient had been taking a drug for a psychiatric condition. Which of th following drugs is most likely to be responsible for this untoward severe reaction?

a. Alprazolam .

b. Imipramine .

c. Lithium .

d. Mirtazapine .

e. Phenelzine.

8. Opioid analgesics are either contraindicated or must be used with extreme caution in several cl situations. For morphine such situations do not include

a. Adrenal insufficiency.

b. Biliary tract surgery.

c. Hypothyroidism.

d. Late stage of labor.

e. Pulmonary edema.

14. Hormones that are useful in the diagnosis of endocrine insufficiency include

a. Corticotropin-releasing hormone.

b. Cosyntropin.

c. Gonadotropin-releasing hormone.

d. Thyrotropin-releasing hormone

e. All of the above.

15. A 47-year-old man exhibited signs and symptoms of acromegaly. Radiologic studies showed presence of a large pituitary tumor. Surgical treatment of the tumor was only partially effective controlling his disease. At this point, which of the following drugs is most likely to be used as pharmacologic therapy?

a. Cosyntropin.

b. Desmopressin.

c. Leuprolide.

d. Octreotide.

e. Somatropin.

Items 16- 18: A 24-year-old woman is found to have thyrotoxicosis. She appears to be in good h otherwise. It is decided to place her on antithyroid drug therapy.

16. Agents that could be used to treat this woma's thyrotoxicosis Do NOT include

a. Methimazole.

b. Potassium iodide.

c. Propylthiouracil.

d. Radioactie iodine.

e. Thyroglobulin.

17. Potential drug toxicites that might be considered in this case are LEAST likely to include

a. Iodide ion: Rashes.

b. Methimazole: Agranulocystosis.

c. Propylthiouracil: Liver toxicity.

d. Radioactive iodine: Radiation damage to ovaries.

e. All of the above.

18. The patient is lost to follow-up before therapy is begun, but she returns 6 months later for a workup. Although 3 months pregnant, she has lost weight, has a marked tremor, and her restin rate is 120/minute. Her thyrotoxicosis is obviously worse, and the gland is larger and more vasc decided to correct her thyroid abnormality surgically. Before surgery can be done, here gland s reduced in size and vascularity by administering

a. Propylthiouracil.

b. Radioactive iodine.

c. Iodide ion.

d. Propranolol.

e. All of the above.

19. Effects of glucocorticoids do not include

a. Altered fat deposition.

b. Increased blood glucose.

c. Inhibition of leukotriene synthesis.

d. increased skin protein synthesis.

e. Reduction in circulating lymphocytes.

20. Toxic effects of glucocorticoids do not include

a. Growth inhibition.

b. Hypertension.

c. Psychosis.

d. Hpoglycemia.

e. Salt retention.

21. A 46-year-old male patient has Cushing's syndrome that is due to the presence of an adrenal tumor. Which of the following drugs would be expected to reduce the signs and symptoms of the man's disease?

a. Betamethasone.

b. Cortisol.

c. Fludrocortisone.

d. Ketoconazole.

e. Triamcinolone.

22. In the treatment of congenital adrenal hyperplasia in which there is excess production of cortisol precursors due to a lack of 21β-hydroxylase activity, the purpose of administration of a synthetic glucocorticoid is

a. Inhibition of aldosterone synthesis.

b. Normalization of renal function.

c. Prevention of hypoglycemia.

d. Recovery of normal immune function.

e. Suppression of ACTH secretion.

Items 23-24: A 54-year-old man with tuberculosis has developed signs of severe acute adrenal insufficiency.

23. This patient is not likely to develop

a. Hypoglycemia if food is withheld.

b. Reduced ability to combat infection.

c. Reduced ability to excrete a water load.

d. Moon face.

e. Reduced blood volume.

24. The patient should be treated immediately. Which of the following combinations is most

a. Aldosterone and fludrocortisone.

b. Dexamethasone and triamcinolone.

c. Fludrocortisone and triamcinolone.

d. Cortisol and fludrocortisone.

e. None of the above.

25. Which one of the following is not a recogaized of androgens or anabolic steroids

a. Cholestatic Jaundice and elevation of AST levels in the blood in adult men.

b. Growth of facial hair in women.

c. increased muscle bulk.

d. Increased milk production in nursing women.

e. None of the above.

26. A 50-year-old woman with a positive mammogram undergoes lumpectomy and a small carcin removed. Biochemical analysis of the cancer reveals the presence of estrogen and progesterone re After this procedure, she will probably recieve

a. Danazol.

b. Flutamide.

c. Leuprolide.

d. Mifepristone.

e. Tamoxifen.

27. A young women complains of severe abdominal pain in the time of menstruation. Careful exa indicates the presence of significant endo metrial deposits on the pelvic peritoneum. The most appropriate therapy for this patient would be

a. Flutamide, orally.

b. Norgestrel as an implant.

c. Medroxyprogesterone acetate by intramuscular injection.

d. Raloxifene, orally.

e. None of the above.

28. A 60-year-old man is found to have a prostate lump and and elevated PSA (prostate-specific anti blood test. MRI examination suggests several enlarged lymph nodes in the lower abdomin, and x-ra reveals two radiolucent lesions in the bony pelvis. This patient might benefit from treatment with a the following EXCEPT

a. Flutamide.

b. Ketoconazole.

c. Leuprolide.

d. Mifepristone.

e. Raloxifene.

2. What is the major use of buprenorphine? Why? Give its adverse effects? (6 Marks)

3. What are hMG, hCG, Follitropin? Give their clinical uses? (6 Mark

9. The unique property of SERMs is that they

a. Activate a unique plasma membrane-bound receptor

b. Have both estrogenic and progestational agonist activity

c. Inhibit the aromatase system that is required for estrogen synthesis

d. Act as agonists in some tissues and antagonist in other tissues

e. Produce estrogenic effects without binding to estrogen receptors

10. A 52-year-old postmenopausal patient has evidence of low bone mineral density. She and her physician are considering therapy with raloxifene, or a combination of conjugated estrogens and medroxyprogesterone acetate. Which of the following patient characteristics is MOST likely to lead them to select raloxifene?

a. Previous hysterectomy.

b. Recent vaginitis.

c. Rheumatoid arthritis.

d. Strong family history of breast cancer.

e. Troublesome hot flashes.

Part II: Answer the following questions: (40 Marks)

1. "Tolvaptan has abroad spectrum of anticonvulsant action". Why? Give its clinical uses and adverse effect."

(6 Marks)

4. what is the prefered drug for treatment of hypthyroidism? Why? Give its adverse effects in children? (6 Marks)

5. How does drospirenone differ from norgestrel? (3 marks)

6. What are the differences between fluoxymesterone and testosterone? (3 Marks)

7. What is the advantage of alternate-day ... corticosteroids ... unsuitable for alternate-day therapy? Why? (4 Marks)

8. How does dexmethazone differ from prednisone? (3 Marks)

9. What are the consequences of excess mineralocorticoid action? (3 Marks)

Dr. Moha...