Pharmacology - midterm exam

إعداد :

Content :

- **Defination of pharmacologylecture**
- **Pharmacodynamic 1, 2 & 3 lectures**
- **Drug administration and absorptionlecture**
- **Drug distribution,metabolism,excretionlecture**
- **Phrmacovigilance & adverse drug reactionslecture**
- **Pharmacogeneticslecture**
- **Drug-prescribinglecture**
- **Poisoninglecture**
- **Drug Prescribing in Pregnancy and Lactationlecture**
- **New drugs lecture**

1) Drug X was given oral by swallowing in a dose of 500 mg. If its fractional absorption from intestine is 0.7 & ER is 0.3, calculate its F?

a. 150
b. 250
c. 350
d. 400
e. 500

2) Drug X is a weak organic base pKa 5.4 that is excreted in urine. If the concentration of the uncharged lipid soluble form of drug X in plasma (pH 7.4) is 200 uM , calculate the total amount of drug X in urine at pH 6.4 ?

a. 12
b. 14
c. 20
d. 22
e. 32

3) Drug A follows first order kinetics was given to 70 kg man. If its t½ is 5 h, and its CL_{total} is 1.4 L / h, Calculate in which compartments of body fluid drug A is mainly localized

a. ICF
b. ECF
c. ICF and ECF
d. Plasma
e. Stored in some tissue

4) Implications of large FPHE except:

a. Parenteral doses are lower than oral doses
b. The oral dose is lower in hepatic failure
c. The liver excretion of this drug is high
d. The barbecued meet increase plasma level of the drug
e. Grapefruit precipitate the toxins

5) Regarding phase II enzymes which of the following statements is wrong:

a. NAT-2 is involved in the metabolism of isoniazid
b. Clinical testing for TPMT genetic polymorphisms is available
c. TPMT catalyzes methylation of 6-mercaptopurine
d. The percentage of slow acetylators is 10% in North African
e. the most important polymorphisms occur in *N*-acetyltransferase-2 (NAT-2) and thiopurine methyltransferase (TPMT)

Q (6): ALL of the following regarding pharmacokinetic changes during pregnancy are true EXCEPT :

a) Increased plasma volume and body fluids
b) Increased estradiol and progesterone levels
c) Decreased absorption of drugs administrated parenterally
d) Decreased plasma albumin
e) Increased distribution

Q (7): One of the following drugs is used safely during pregnancy :

a) Steroids
b) Vitamins derivatives
c) lithium
d) Warfarine
e) Insulin

Q (8) : All of the following drugs have a teratogenic effect on fetus EXCEPT :

a) Thalidomide
b) Isotretinoin
c) Digoxin
d) Alcohol

Q9: The maximum effect achieved by a drug is measured by

a- efficacy
b- potency
c- quantal response
d- antagonist magnitude
e- graded respose

Q10 : The therapeutic index of drug indicate the following ?

a- safety
b- toxicity
c- potency
d- selectivity
e- efficacy

Q11: Combination of two drug or more may result in (it should be *except*: but the question is incorrect so be careful, we asked about it)

a- agonism
b- synergism
c- potentiation
d- idiosyncrasy
e- interfers in absorption of other drug

12) All of the following statements are correct about the *hospital prescription,* EXCEPT:

A- The dose to be given to patient and its rote
B- frequency of administration
C- duration of use
D- signature of patient
E- signature of doctor

13) Used to give a child that has asthma :

A- aerosol
B- inhaler
C- vaporizer
d. chest ointment
e. Sublingual tablet

14) Regarding drug metabolism , one of the following is false :

A- capacity for oxidation rxn is greater than synthetic rxn
B- prodrugs are bioactivated into active metabolites
C- molecules of inactive metabolites are more polar than parent drug molecule
D- most drugs undergo non synthetic metabolic rxn at first
E- conjugated drug metabolites in bile usually undergo enterohepatic cycling

15) All of the following can increase renal excretion except :

A) mannitol
B) low % binding of drug molecule to albumin in plasma
C) probenecid
D)increase renal blood flow
E) ion trapping of drug in urine

16) Sugammadex is a new drug that reverses the action of rocuronium & certain other skeletal muscle relaxing agents (non depolarizing neuromuscular blocking agents) ; it appears to interact directly with the rocuronium molecule & not at all with the receptor , which of the following best describes sugammadex :

A) chemical antagonist
B) non competitive antagonist
C) partial agonist
D) physiological antagonist
E) pharmacologic antagonist

17) All of the following can be indications for rectal suppository except :

A) 10 year old child
B) vomiting
C) gastric irritant drug
D) coma
E) high fever in 1 year old child

18) All of the following are true about inscription of the prescription except :

a. Drug name
b. Dose form
c. Dispensing instructions
d. Proper use instructions
e. Dose strength in system metric

19) A study was carried out in isolated intestinal smooth muscle preparations to determine the action of a new drug "novamine," which in separate studies bound to the same receptors as acetylcholine. In the absence of other drugs, acetylcholine caused contraction of the muscle. Novamine alone caused relaxation of the preparation. In the presence of a low concentration of novamine, the EC50 of acetylcholine was unchanged, but the Emax was reduced. In the presence of a high concentration of novamine, extremely high concentrations of acetylcholine had no effect. Which of the following expressions best describes novamine?

(A) A chemical antagonist
(B) An irreversible antagonist
(C) A partial agonist
(D) A physiologic antagonist
(E) A spare receptor agonist

20) Which of the following drugs is least susceptible to ADRs:

a. Warfarin
b. Antidiabetic
c. Antibacterials
d. Biosimilars
e. Steroids

21) What is the meaning of the abbreviation SOS:

a. Once a day
b. 2 times a day
c. If needed
d. Before meal
e. After meal

22) Which one of the following is not caused by salicylatetoxicity :

a. Respiratory acidosis
b. Hyperthermia
c. Respiratory alkalosis
d. CV collapse
e. Hyperventilation

23) Which one of the following is not a cause of poor compliance

a. Good teaching of the doctor to the patient
b. Polypharmacy
c. Disabling adverse effects occur
d. Frequent doses (> 3 / d)
e. Age

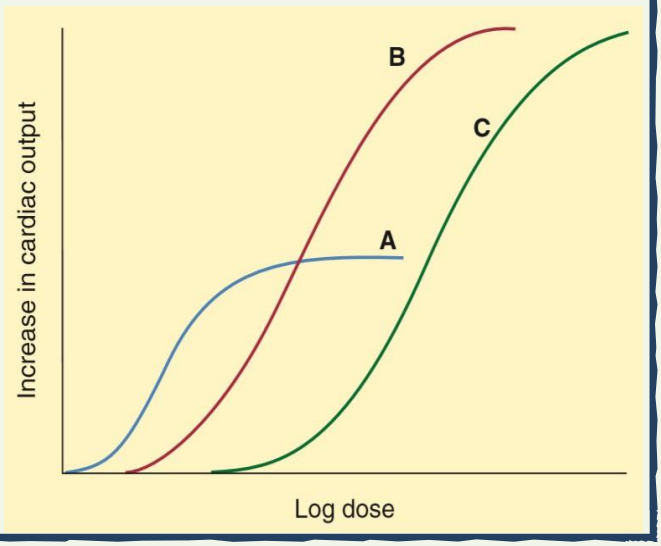
24) One of the following is not associated with pharmacogenomics of drugs:

a. Sodium channels
b. Angiotensin converting enzyme (ACE)
c. B2-adrenergic receptor-B2 agonist
d. MDR1 (multi-drug resistant) P-glycoprotein
e. Serotonin transporter

25) Prior to clinical trials in patients with heart failure, an animal study was carried out to compare two new positive inotropic drugs (A and B) to a current standard agent (C). The results of cardiac output measurements are shown in the graph below.

Which of the following statements is correct?

(A) Drug A is most effective
(B) Drug B is least potent
(C) Drug C is most potent
(D) Drug B is more potent than drug C and more effective than drug A
(E) Drug A is more potent than drug B and more effective than drug C



26) Two cholesterol-lowering drugs, X and Y, were studied in a large group of patients, and the percentages of the group showing a specific therapeutic effect (35% reduction in lowdensity lipoprotein [LDL] cholesterol) were determined. The results are shown in the following table :

Drug Dose (mg)	Percent Responding to Drug X	Percent Responding to Drug Y
5	1	10
10	5	20
20	10	50
50	50	70
100	70	90
200	90	100

Which of the following statements about these results is correct?

(A) Drug X is safer than drug Y
(B) Drug Y is more effective than drug X
(C) The 2 drugs act on the same receptors
(D) Drug X is less potent than drug Y
(E) The therapeutic index of drug Y is 10

27) Choose the wrong metabolizing enzyme and drug coupled:

a. CYP2C9 – NSAIDs
b. Vitamin K epoxide reductase complex (VKORC) - Warfarin
c. CYP3A4-beta adrenergic receptors

28) All of the following follow first order, EXCEPT:

d. A-propranolol
B-morphin
C-theophylline
D-Alcohol

29) A 55-year-old man is seen in the clinic with hypertension of 150/95 mm Hg (millimeters of mercury). His personal medical history and physical examination are otherwise unremarkable but his family history is positive for early deaths due to cardiovascular disease. A decision is made to treat his hypertension, starting with a calcium channel blocker. Blocker A in a dose of 5 mg produces the same decrease in blood pressure as 500 mg of blocker B. Which of the following predictions is most accurate?

(A) Blocker A will be more efficacious than blocker B
(B) Blocker A will be about 100 times more potent than blocker B
(C) Toxicity of blocker A will be less than that of blocker B
(D) Blocker A will have a wider therapeutic window than blocker B

(E) Blocker A will have a longer half-life than blocker B

30) Graded and quantal dose-response curves are being used for evaluation of a new analgesic drug in the animal laboratory and in clinical trials. Which of the following statements best describes graded dose-response curves?

(A) More precisely quantitated than quantal dose-response curves

(B) Obtainable from isolated tissue preparations but not from the study of intact subjects

(C) Used to determine the maximal efficacy of the drug

(D) Used to determine the therapeutic index of the drug

(E) Used to determine the variation in sensitivity of subjects to the drug

31) All of the following about the amount of drug eliminated by zero order are false, EXCEPT:

Answer: its constant

32)One of the following statements is wrong combination:

Answer: Type B ADRS – dose dependent

33) wrong about ACE inhibitors is:

Answer: reversible renal damage

34)All of the following are causes of paracetamol toxicity except :

Excess NABQI

Increase glutathione

Glutathione depletion

Cell death

Oxidization of thiol group of enzymes

35) The fastest systematic effect is throw:

A-SC

B-Rectal

C-Liquid as syrup

D-Sublingual

36) Half life of drug that is metabolized by liver, all of the following are correct, EXCEPT:

Answer: It's prolonged in the condition of renal impairment

37)All of the following are correct about causes of death in drug poisoning, EXCEPT:

Answer: urticaria

38) Which of the following doesn't decrease intestinal absorption?

Answer: metaclopromide

39)Which of the following isn't involved in mixed function system:

CYP450 reductase

O2

NADPH

cytosol co-factor

CYP3A4 .

40) All of the following decrease the absorption of SC, EXCEPT:

Answer: Hyaluronidase injection

41)the following biochemical reactions occur at cytosol of liver cells except : :
Alcohol oxidation
Nitro oxidation
glutathione conjugation
methylation

42) All of the following are true about unequal distribution, EXCEPT:
Answer: Vd=40

43) The wrong statement about simple lipid diffusion?
Answer: Cannot transport water soluble molecules

44) All of the following inhibit liver metabolism, EXCEPT?
Answer: cabbage

45) Pralidoxime is used for?
Answer: OPI treatment

46) Which of the following is wrong statement about ADR?
Answer: reporting is compulsory

47)One of the following is incorrect: placebo use as positive control.

48) The property that is shown in most clinically used drug, with an appropriate dosage?
A- selectivity
B- specificity

49) All of the following are true, Except :
Answer: 10% of population have high TPMT activity

50)one of the following is incorrect :
Answer: We give higher doses of drugs for intermediate metabolizers

"إننا نخاف فقط مما نجهله, وال يوجد ما يخيفنا على الإطالق بعد أن نفهمه"
وفقكم جميعاً