PHARMACOLOGY TEST BANK 2021

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5TH WEEK

Q1: Half life (t1/2) is the time required to:
a. Change the amount of a drug in plasma by half during elimination
b. Metabolize a half of an introduced drug into the active
c. Absorb a half of an introduced drug
d. Bind a half of an introduced drug to plasma proteins

Q2: Binding of a drug to plasma proteins will tend to:
a. Decreasehalf-life.
b. Decrease its rate of glomerular filtration.
c. Increase its rate of biotransformation.
d. Increase its concentration in the plasma
e. Increase its pharmacological activity

Q3: If a drug is eliminated by first order kinetics
a) A constant amount of the drug will be eliminated per unit time
b) Its clearance value will remain constant
c) Its elimination half-life will increase with dose
d) It will be completely eliminated from the body in 2 x half-life period

Q4: The loading dose (DL) of a drug is usually based on the
a) Total body clearance of the drug
b) Percentage of drug bound to plasma proteins
c) Fraction of drug excreted unchanged in the urine
d) Apparent volume of distribution and desired drug concentration in plasma
e) Area under the plasma drug concentration versus time curve (AUC)

Answers: 1-a 2-b 3-b 4-d

Q5: Which of the following results in a doubling of steady-state conc. of the drug
a- Doubling the rate of infusion
b- Maintaining the rate of infusion but doubling the loading dose
c- Doubling the rate of the infusion and doubling the concentration of the infused drug.
d- Tripling the rate of infusion

Q6: A drug with a half life of 8 hours is administered by continuous intravenous infusion. How long will it take to reach 90% of its final steady-state level?
a- 12hours
b- 18 hours
c- 25hours
d- 30 hours
e- 40 hours

Q7: Normally, acetaminophen has a Vd = 70L and Cl = 350 mL/min. If acetaminophen was administered to a patient with 50% renal function, what parameter would differ from normal?
a) Loading dose would be higher
b) Maintenance dose would be lower
c) t 1/2 would be higher
d) Vd would be 35L
e) Cl would be 700 mL/min

Q8: The route of drug administration is determined by
a- Water solubility of the drug
b- Lipid solubility of the drug
c- Ionization of the drug
d- Desirability of rapid onset of action of the drug
e- All of the above

Answers: 5-a 6-c 7-c 8-e

Q9: What is characteristic of the oral route?
a. Fastonsetofeffect
b. Absorption depends on GI tract secretion and motor function
c. A drug reaches the blood passing the liver
d. The sterilization of medicinal forms is obligatory

Q10: Pick the feature of the sublingual route:
a) Pretty fast absorption
b) A drug is exposed to gastric secretion
c) A drug is exposed more prominent liver metabolism
d) A drug can be administrated in a variety of doses

Q11: Correct statements listing characteristics of a particular route of drug administration include all of the following EXCEPT:
a) Intravenous administration provides a rapid response
b) Intramuscular administration requires a sterile technique
c) Inhalation provides slow access to the general circulation
d) Subcutaneous administration may cause local irritation

Q12: Biotransformation of the drugs is to render them:
a) Less ionized
b) More pharmacologically active
c) More lipid soluble
d) Less lipid soluble

Answers: 9-c 10-a 11-c 12- d

Q13: All of the following statements are true EXCEPT:
a. Biotransformation of drugs in the body usually yields products that diffuse across renal tubular membranes less readily than the parent compounds.
b. Biotransformation reactions often yield products that are inactive pharmacologically.
c. Biotransformation reactions can yield products that are pharmacologically more active than the parent compound
d. Biotransformation reactions can yield products that are more lipophilic than the parent compound.
e. In some cases, biotransformation reactions enhance the toxicity of chemicals introduced into the body.

Q14: All of the about reaction of drug metabolism is correct EXCEPT:
a. Water soluble drugs must first be metabolized in the liver
b. Phase 1 reaction function to convert lipophilic molecules into lipophobic
molecules
c. Phase 1 reactions involved in drug metabolism catalyzed by the p450 system
d. Phase II include conjugation with endogenous substances

Q15: The addition of glucuronic Acid to drug
a- Lowers its water solubility.
b- Usually leads to inactivation of the drug
c- Is an example of Phase 1 reaction.
d- Occurs at the same rate in adults and newborns.
e- Involves cytochrome P450

Answers: 13-d 14-a 15-b

Q16: In case of liver disorders accompanied by a decline in microsomal enzyme activity, the duration of action of some drugs is:
a) Decreased
b) Enlarged
c) Remainedunchanged
d) Changed insignificantly

Q17: Which one of the statements regarding microsomal enzymes is not correct
a) They lack specificity
b) Capable of metabolizing substances of different structure
c) Only catalyze reaction of compounds which are lipid insoluble
d) All the above

Q18: A 65-year-old man suffering from osteoarthritis has been taking Naproxen 500 mg twice a day for one month. For some reasons, the physician decided to try another drug that work on the as same receptor and prescribed him celecoxib that has 5 times more potent than naproxen. Which of the following was most likely the dose of celecoxib prescribed to the patient?
A) l0mg
B) 100 mg
C) 50mg
D) 1000 mg
E) 5mg

Answers: 16-b 17-c 18-b

Q19: High plasma protein binding?
A) Generally makes the drug long acting
B) Facilitates glomerular filtration of the drug
C) Increases the volume of distribution of the drug
D) Minimizes drug interactions
E) Makes the drugs more potent

Q20: The development of tolerance to be a drug is accompanied by an increase in which of the following parameters?
A) potency
B) effective dose
C) therapeutic index
D) all of the above
E) maximal efficacy

Answers: 19-a 20-b