Brenner: Pharmacology, 4th Edition

Chapter 02: Pharmacokinetics

Test Bank

Multiple Choice

1. A patient with renal disease exhibits zero-order elimination of a drug she is taking. Which description of the drug's elimination half-life is correct?

    A. directly proportional to the drug's clearance
    B. inversely proportional to the drug's volume of distribution
    C. directly proportional to the plasma drug concentration
    D. inversely proportional to the dose administered
    E. varies with the route of drug administration

    ANS: C. directly proportional to the plasma drug concentration

2. A drug with a first-order elimination rate constant of 0.23 L/hour is administered by continuous intravenous infusion. About how long will it take to achieve a steady-state plasma drug concentration?

    A. 5 hours
    B. 10 hours
    C. 15 hours
    D. 30 hours
    E. 50 hours

    ANS: C. 15 hours

3. Which description best characterizes drug metabolism involving conjugation of a drug with glucuronate?

    A. reduces the rate of biliary drug excretion
    B. increases the rate of renal drug excretion
    C. typically increases the pharmacologic activity of the drug
    D. primarily occurs in the smooth endoplasmic reticulum
    E. often induced or inhibited by other drugs

    ANS: B. increases the rate of renal drug excretion

4. A patient with peptic ulcer disease is found to require larger than usual doses of omeprazole to cure her peptic ulcer. Which drug metabolism phenotype is most likely present in this patient?

   A. CYP2D6 poor metabolizer phenotype
   B. CYP2D6 extensive metabolizer phenotype
   C. CYP2C19 poor metabolizer phenotype
   D. CYP2C19 extensive metabolizer phenotype
   E. rapid acetylation phenotype

   ANS: D. CYP2C19 extensive metabolizer phenotype