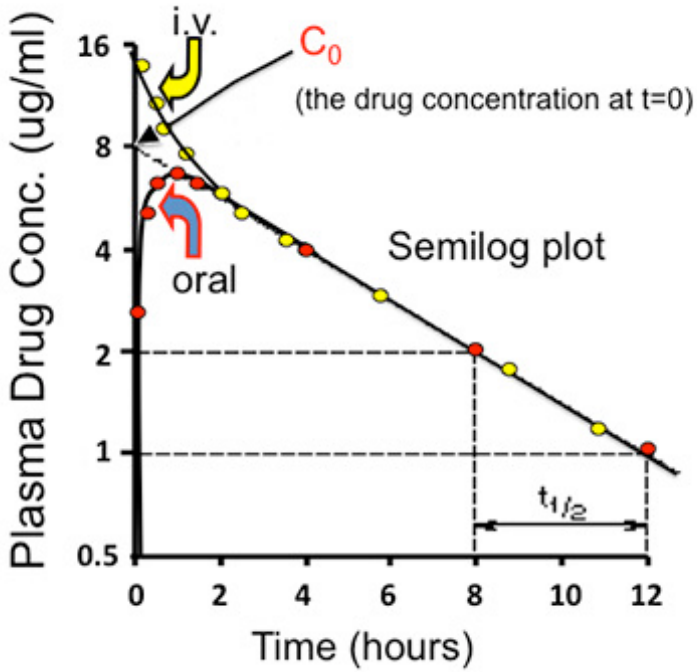

النادي الطبي
تجدون في guidance مادة الفارما على موقع النادي :
للوصول الى guidance الفارما و تفاريغ المادة كاملة :
كل اصال الفريق العلمي تنشر على قناة التيليغرام
كويزات الدكاترة

Quiz

* 1)The following graph shows the elimination time course obtained after giving a 400 mg dose of a drug given by either i.v. or oral routes. From the data shown, the volume of distribution of the drug is:
*
*

* A 2 L
* B 4 L
* C 20 L
* D 40 L
* E 50 L



Quiz

2- A 70 kg man with severe burns arrives in the Emergency Department and requires i.v. morphine to treat his pain. The Vd for morphine is 200 L. What i.v. loading dose do you need to give to rapidly achieve a therapeutic level of 60 ng/ml and relieve his pain

A)3 ug
B)30 ug
C) 120 ug
D)12 mg
E) 30 mg

Quiz

3- Brian is a 40 kg teen who has been admitted to the hospital with a severe case of septicemia caused by a Gram-negative bacteria that has been determined to be sensitive to gentamicin. Gentamicin's Vd = 0.5 L/kg. What i.v. loading dose would you give Brian to rapidly achieve a therapeutic plasma level of 5 ug/ml

* A 20 mg
* B 25 mg
* C 50 mg
* D 100 mg
* E 500 mg

Quiz

4- * After being given a loading dose, treatment of Brian's bacterial infection requires maintenance dosing with gentamicin for 48 hours. Gentamicin's elimination clearance is 5.0 L/hr. What i.v. maintenance dose should you give every 8 hours to maintain an average plasma level of 5 ug/ml?

* A 20 mg
* B 25 mg
* C 50 mg
* D 100 mg
* E 200 mg
* F 500 mg

5- You start an i.v. infusion of a drug to a patient at a rate of 500 mg/hr. The drug is known to be cleared by first order kinetics. Which single variable will allow you to determine how long it will take to reach a steady-state drug level?

* A Bioavailability
* B Dosage rate (mg/hr)
* C Elimination half life
* D infusion rate
* E Volume of distribution

Quiz

Done by anas zakarneh

Answers

1) E……

8 ug/ml = 8 mg/L

C_0 (mg/L) = Dose/Vd

Vd = (400 mg)/(8 mg/L) = 50L

2)D

Correct! C_0 (mg/L) = Dose/Vd, *or* Dose = C_0 x Vd. Therefore the Loading Dose = 60 ug/L x 200 L = 12,000 ug or 12 mg.

3)D

Correct! In this patient Vd = 0.5 L/kg x 40 kg = 20 L. 5 ug/ml = 5 mg/L. Dose = 5 mg/L x 20 L = 100 mg.

4) E-

Correct! Dosage Rate = Css x CL = (5 mg/L) x (5L/hr) x (8 hrs) = 25 mg/hr x 8 hrs = 200 mg.

5) c

Correct! With a constant infusion rate, and constant 1st order clearance, in one half-life you will achieve 50% of the steady-state plasma level. In two half lives you will achieve 75% of the eventual steady state level, and in 3.3 half-lives you will achieve 90% of the steady state level. Note that $t_{1/2}$ = Vd/Cl. As a result, both clearance and volume of distribution (or changes in these variables) affect the drug's half-life.