Mid-Term Assignment (Summer-2020) (BS-MLT)

Course Title: General pharmacology
Submitted by: shamsut tamraiz
Submitted to: mam nadra
Id cart: 14537

Q1. Enumerate various routes of drug administration, explain parenteral routes in detail.

Ans…

Enumerate various routes of drug administration,

Enumerate on the following different routes of the drug administration,

1. Enteral route,

Enteral route is contain the following tow route the first one is

A) Oral route and the second one is

B) Sublingual route.

2. Parenteral route,

Parenteral route is contain is 4 types of routs

A) Intravenous,

B) Intramuscular,

c) Subcutaneous,

D) Topical.

And other route is contain the following lines,

A) Transdermal
B) Intratheca
C) Rectal
D) Inhalation and
E) Intranasal

Explain parenteral routes in detail.

Ans…

Parenteral dose forms are made for administration like injection or infusion. Common types of injections are intravenous (in a vein), subcutaneous (under the skin), and intramuscular (into muscle).Infusions are usually given intravenously. Parenteral routs forms can be solutions, suspensions or emulsions, but they must be sterile. If administered intravenously, they can be easily absorbed into the bloodstream.

Q2. WHAT DOES WATER COMPARTMENT MEANS, EXPLAIN ITS TYPES IN DETAIL.

Ans…

Water compartment means

Water compartment means is a compartment is a fixed volume of body fluids, usually in the human body, but also of many animals together.

Explain its types in detail.

The human body and even its physical individuals can theoretically be divided into different fluid parts, the two main compartments are the intracellular and extracellular compartments other one is also known is Total body water.

1) *Total body water,*

Body water Therefore, the drug distributes sixty percent of body weight or seventy kg per person in a volume of about forty two L. This reflects the apparent volume of ethanol distribution.

2) *Extracellular fluid,*

If a drug has a low molecular weight but is hydrophilic, it can be transferred to the interstitial fluid through the endothelial salt junctions of the capillaries. However, hydrophilic drugs cannot penetrate the cell's lipid membranes to enter the water phase inside the cell. Therefore, these drugs divide into a volume that is a combination of plasma water and interstitial fluid, which together form an extracellular fluid. It weighs about twenty percent of body weight, or about fourteen L per seventy kg person.

3) *Plasma compartment,*

If a drug has a very large molecular weight or binds plasma proteins in large quantities, it is too large to exit the endothelial slit junctions of the capillaries and, thus, the plasma (vascular) compartment. I get stuck effectively. As a result, the drug splits into a volume (plasma) that is about six percent of body weight or 60.99 kilograms in an individual, about four L is liquid in the body.

Q3. (1) WHAT DOES TOTAL BODY CLEARANCE MEANS.

Ans…

Total body [systemic] clearance, cl Total or clt, is a combination of various drug metabolism and drug clearance organs. The most important organ is the kidney Sometimes the liver also helps eliminate drugs through metabolism and / or excretion. A patient with kidney failure can sometimes benefit from a drug that is excreted in this way, in the intestine and esophagus instead of the kidney. Some drugs can also be reconstituted through enter hepatic circulation, thus prolonging their half-life.

(2) WHAT ARE DRUG ELIMINATION STAGES, EXPLAIN BRIEFLY,

What is drug elimination?

The process of removing an administered drug from the body. The pharmacokinetic, (absorption, distribution, metabolism, and excretion) considers this multiplicity to include both metabolism and excretion.

Stages of drugs elimination,

Describe on the following three stages.

a) Proximal tubular secretion

b) Distal tubular reabsorption

c) Renal Glomerular filtration

Proximal tubular secretion,

a) Proximal tubular secretion:

Drugs that were not transported to the glomerular filtrate release the glomeruli through the pharyngeal arterial, which forms a capillary plexus around the nephric lamina in a nearby tube. Survival is mainly found in adjacent taps through two energy-requiring active transport (carrier-requiring) systems, one for anions (e.g., degraded forms of weak acids) and one Cation (e.g., protonated shapes of weak bases).

b) Distal tubular reabsorption,

When a drug moves into the contaminated tubes, its concentration increases, and it exceeds the placenta. The drug, if not denied, can spread into the systemic circulation outside the nephritic lemons. Manipulating urine pH to increase the ionized form of the drug in lemons can minimize the amount of diffusion, and therefore, increase clearance of unwanted drug. As a general rule, weak acid can be eliminated from urinary incontinence, while elimination of weak stools can be enhanced by urinary acidity. Quantitative aspects of elimination of kidney drugs.

c) Renal glomerular filtration

Glomerular filtration drugs enter the kidney through the renal arteries, which divide into a glomerular capillary plexus. As part of the glomerular filtrate, the free drug (albumin is not bound) slips the capillaries in place of the bowman, The glomerular filtration rate (125 ml / min) is typically about 20% of renal plasma flow (600 ml / min).

The end