PHARMACOTHERAPEUTICS

 Pharmacotherapeutics word derived from the two words, Pharmakon means 'the drugs' and therapeutic means 'diagnosis or treatment of any disease. It is the branch of the pharmacology which deals with the drug absorption, drug distribution, drug elimination and their action/effects.

 In the other word, we can say that it is provided the information regarding the drugs and their action for preventing/eliminating the disease. On the basis of receptor capability and bioavailability drugs are act on the body and cure the disease.

 Pharmacotherapy is included as the drug therapy to treating the disease after the surgical, radiation, or physical therapy.

 In the modern day, different types of chemical constituted medicine or available which show the effect (may be positive or negative), to correct these problem (according to the demand or patient need) pharmacotherapeutics play a major role in the Indian system of medicine.

Branches of the Pharmacotherapeutics

1. Pharmacokinetics—

a. Drug absorption— Initially, when we consume the medicine then it is dissolve or break down into the smaller or absorbable particle absorbed by the different-different route according to their solubility and protein/receptor binding capacity.

 In our G.I.T absorption are starting from the upper parts(mouth) to middle part(stomach, intestine) and finally lower part(rectal and anal) of G.I.T.

b. Drug distribution— After the completion of absorption, drugs are distributed to effective area through the blood or other connective tissue and finally bind to the specific receptors and shows their action. Distribution is also based on the solubility and protein/receptor binding capacity.

c. Drug elimination— on the basis of bioavailability of any drug, drug is excreted/eliminated from the body. When the bioavailability is more than drugs are binds to the receptors and show effects and waste/metabolism products are eliminate but when bioavailability are less then more amount of drug are eliminated as such through urine or fecal matter.

2. Pharmacodynamics—

a. Systemic effects- In this branch we are study about the drug action on body organs and their responses. Different chemical show the different mechanism of action on the different body parts.

b. Cellular effects- when the drugs are absorbed then it reach to the cell and binds to the specific cell receptors and carry on the metabolism.

Scope and Objective of Pharmacotherapeutics

- ✓ We gain the correct knowledge regarding the drug chemical reactions in the body
- ✓ We decide the correct drugs categories for treating the specific disease.
- ✓ We decide the correct dose and formulation for treating the specific disease.
- ✓ We decide the right patient for the particular drug.
- ✓ We decide the suitable/effective route of administration
- ✓ We decide the correct time of administration for particular drug (many gastric related drugs take by empty stomach and many of drugs take after taking the meals)
- ✓ Decide the drug tolerance and resistance capacity.
- ✓ We decide the drug incompatibility or adverse effect (aspirin is not taken in dengue condition).
- ✓ we decide about the drug food interactions (calcium rich food and antibiotics should not take together).
- ✓ We decide the natural/environmental condition for taking the particular drug.