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**MATRIX NUMBER: 17/mhs07/010**

**DEPARTMENT:**Nursing

**COURSE:** Systemic Pharmacology in Nursing Practice

**COURSE CODE**: PHA 324

**ASSIGNMENT:**Classification of Antimalarial With Examples.

                                   CLASSIFICATION OF ANTIMALARIAL

1. 4-Aminoquinoline:

Is a form of aminoquinoline with the amino group at the 4-position of the quinoline. The compound has been used as a precursor for the synthesis of its derivatives. Chemical formula- C9H8N2. It appears in powder to crystalline white or yellow or orange. It causes skin and eye irritation. It is used as an Antimalaria agent useful in treating Erythrocytic Plasmodial Infections.

Examples​​

 Chloroquine

 Amodiaquine

Hydroxychloroquine.

2. 8-Aminoquinoline:

Is the 8-amino derivative of quinoline. It is structurally analogous to 8-Hydroxyquinoline. The two nitrogen atoms are ideally situated to form complexes with metal ions. Derivatives of 8-aminoquinoline are effective directing groups in organic synthesis.

Examples

Primaquine

Tafenoquine

Bulaquine

3. Cinchona Alkaloids:

Is a genus of flowering plants in the family Rubiaceae containing at least 23 species of trees and shrubs. Cinchona has been historically sought after for its medical value, as the bark of several species yields Quinine and other Alkaloids that were the only effective treatments against malaria during the height of European colonialism.

Examples

Quinine

Quinidine

4. Quinoline Methanol:

This type of antimalaria is a compound that inhibits the growth of drug sensitive and resistant strains of Plasmodium falciparum.

Example

 Mefloquine

5. Biguanides:

Is the organic compound with the formula HN(C(NH)NH2)2. It is a colorless solid that dissolves in water to give highly basic solution. These solutions slowly hydrolyze to ammonia and urea.

Example

Proguanil

Chlorproguanil

6. Sesquiterpene Lactones:

Are a class of Sesquiterpenoids that contains a lactose ring. They are most often found in plants of the family Asteraceae (daisies, asters). Other plant families with SL are Umbelliferae (celery, parsley, carrots) and Magnoliaciae (magnolias). Sesquiterpene Lactose is a collection of colorless, lipophilic solids. SLs are a rich source of drugs.

Examples

 Artesunate

 Artemether

 Arteether

7. Diaminopyrimidines

Examples

Pyrimethamine

8. Antibiotics

Examples

Tetracycline

 Doxycycline

9. Amino alcohols

Examples

Halofantrine

Lumefantrine

10. Naphthoquinone

Examples

Atovaquinone

11. Sulfonamides & sulfone

Examples

Sulfadoxine

Dapsone

Sulfamethopyrazine

12. Naphthyridine

Examples

Pyronaridine