

MALARIA:

Agouti = Pivon - benign kishin malaria

P. falciparum - malignant tertian malaria

P. malariae - benign quartan malaria

P. ovale - tertian malaria

P. knowlesi - quotidian or simian malaria

HOST :-

Female Anopheles mosquito (Definitive host)

Man - Intermediate host

LIFE CYCLE :-

Human: Asexual cycle

1) Pre-erythrocytic schizogony

2) Erythrocytic schizogony

3) Gametogony

I Pre-erythrocytic :- Attachment :-

Cytoplasmic protein on surface of sporozoite + receptors

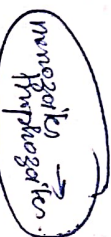
Bind on the surface of hepatocytes.

Trophozoites :- Inside hepatocyte, Sporozoites → hepatocytes

Schizogony :- Pre-erythrocytic schizogony (malariae). All surface of hepatocytes - merozoites are released. Hypnozoites

II. Erythrocytic Schizogony

Hepatic merozoites + Blood stream



Early trophozoites are ring shaped

Klate merozoites

Erythrocytic schizonts

↓ rupture

Daughter merozoites

III. Gametogony :-

After a series of erythrocytic cycle, some merozoites enter into RBCs → gametocytes.

Pathogenesis :-

1P = Pivon (14 days)

P. falciparum (12 days)

P. malariae (28 days)

P. ovale (17 days)

P. falciparum ⇒ sequestrum of parasitites in blood vessels of deep visceral organs like brain, kidney. ⇒ Release of merozoites, candida in hypoxia of int. organs.

Cytocidal merozoites = falciparum 1
erythrocyte membrane protein - 1

Resetting

* Complications

Cerebral malaria

Pericardial malaria

Plasmodium fovea

Chronic complication

1. Tropical splenomegaly syndrome

2. Quaran malarial nephropathy

3. Bursell's lymphoma

Kala Azar

1. Peripheral smear - thick - delicate the parasite, quantitative of parasitaemia, demonstration of malarial pigments.

thin - specimen of malarial pigments

2. ABC :- Emeraldoid RBCs - brilliant greenlets

3. Rapid Diagnostic Test

Antimalarial Drugs :-

Quinines & related :- Chloroquine, quinine, mefloquine
compounds primquine

Artimisin derivatives :- Artemisinin, Artemether, Art...

Hydroxyurea Haquinos :- Atovaquone

Biguanide derivatives :- Proguanil

Diaminopyrimidines :- Pyrimethamine

Sulfonamides - Sulfadiazine & Sulfadoxine

Tetrahydropyridines - Tetracyclines & clomycycline.