

Diseases which
persist:

Prayer time

- Thalassemia
- G6PD
- sickle cell anemia

⇒ High level of infection severe Anemia, cerebral symptoms, Renal failure, pulmonary edema and death is caused by

Other species cause low level of Anemia

Horizonto
salivary gland

↓
Liver (Ascariasis)
(Schizogony)
They invade the hepato
cyte & produce
(Microfilariae) in P. BM,
K.

~~some remain
different
not multiple~~

Hypozitrus
(sensu. v. d. O)

Relayul / Reson

Released from
↑ RBC

Asexual (mitosis)

Herzoties

invade
RBC

PF - (cell Age)
P.V - (Relialogyt)
PM - (oldu RBX)

sexual
lyte

(Fugole Gametogamy)

zoocyte

ben
ny
yabo (Zugol)

HUMAN CYCLE:

→ starts with the sporozoite by the bite of the infected female *Anopheles* mosquito.

Diff. Ages → asexual stage (schizogony)
→ erythrocytic stage.

⇒ Erythrocytic stage:

These sporozoites invade the hepatocytes → They become rounded (spindle shape)

① transform into trophozoites → This undergoes nuclear division (schizogony)

↓
PRE-ERYTHROCYTIC SCHIZONT.

(contain merozoites)

Then liver cell ruptures & release into RBC

→ This development of merozoites are referred to as exoerythrocytic stage (Asexual phase)

→ Some sporozoites of P.v & P.O remain as hypnozoites (do not divide)

→ Reason for Relapse.

⇒ ERYTHROCYTE STAGE:

Merozoites bind to RBC cell membrane → hydrolyse hemoglobin

In RBC → Asexual Reproduction. (Trophozoite → schizont → Merozoite)

→ demonstrated in thick smears.

→ Trophozoites → 1st stage of parasite in the RBC → presence of ring chromatin mass (Ring)

→ Plasmodium feed on Hb. The undigested products of Hb such as Hematin, excess proteins, iron porphyrin → They form Malarial pigment (hemozoin) pigment.

Late Trophozoites → multiple chromatin masses → Schizont form.

Merozoites → Schizont undergo multiple nuclear division. produce Merozoites → infect Adh RBC.

→ paroxysmal fever, chills, Rigors develop. at the end each erythrocytic cycle

SEXUAL FORMS:

Some trophozoites → gametocytes. (Round except in P. falciparum shaped) → They form zygote. infect by the Mosquito. → Mosquito infect human.

MOSQUITO CYCLE:

Gametocyte is an infective form.

→ The male gamete divide into 8 flagellated male body → Microgamete

→ Female gamete → macrogamete +

get

zygote

ookinete stage

(mid gut of mosquito)

Oocyst $\rightarrow$ sporozoites $\rightarrow$ migrate to salivary gland

once infected mosquito Remains infected through life.

MORPHOLOGY:

Peripheral smear: Asexual stage of parasite on RBC.

Spleen $\rightarrow$ splenomegaly

parasitoma here grey or black because of granules, brown black, (hemoglobin pig)

liver - enlarged

Bran $\rightarrow$ caused by P. falciparum, causes Ring hemolysis & small focal inflammatory Rx called malarial or Duck granuloma

asexual form of P. F $\rightarrow$ banana
P. V $\rightarrow$ Round } stored