L.Q (2019)

Plasmodium Vivax

⇒ It is the ~~common~~ most common malaria parasite in man.

⇒ It is the positive organism of being tertian or vivax malaria.

⇒ Four species of ~~[illegible]~~ plasmodium are known to cause different type of malaria fever.

(1) Plasmodium ovale
(2) Plasmodium malariae
(3) Plasmodium vivax
(4) Plasmodium falciparum.

⇒ The parasites was 1st discovered in the human blood (patient) by charles Laveran in 1890

⇒ The oocyte of the parasites found in the stomach of female Anopheles mosqueito. It was discovered by sir Ronald Ross in 1899

Life cycle:

⇒ Plasmodium is diagenetic, completes it's own life cycle in 2 hosts.

⇒ The primary host is female Anopheles mosqueito in which the parasites completes it sexual phase of life cycle.

⇒ The secondary host is the human being in which the parasites completes it's asexual phase of life cycle.

(1) Asexual Reproduction:

→ ~~These~~ This phase is complete in human being. It is divided into 3 stages.

(1) Pre - Erythrocytic stage
(2) Exo - Erythrocytic stage
(3) Erythrocytic stage

(i) The pre-erythrocytic and exo-erythrocytic stages are completed in RBC.

(ii) when an infected female anopheles mosqueito bites a person A large no. of sporozoits enters into the body along with saliva

(iii) The sporozoites enters the liver for pre-erythrocytic stage and exo-erythrocytic stage.

(iv) Through these 2 cycles, large no. of ~~sporozoites~~ merozoits are formed

(v) They enters the RBC for ~~exo~~ erythrocytic stage which is repeated in every 48 hours.

(vi) In this stage, the appearance of symptoms of malaria takes place. so the incubation period is 14 days.

(2) Sexual Reproduction:

(i) some of the merozoits transfer into male gametocytes and female gametocytes.

(ii) The healthy mosquito when bites an infected person, these gametocytes enter into the mosquito body.

(iii) Inside the mosquito stomach, the male and female gametes are produced.

(iv) Both the gamates fuse to form the zygote.

(v) The zygote transferms into ookinete

(vi) The ookinates in the stomach wall the surrounded by cyst and transfered into oocysts

(vii) The oocysts undergoes multiple ~~fusio~~ fusion and sporozoits are formed.

(viii) when the infected mosquito bites a healthy person, the sporozoits are enters into the human body.

Types of Malaria:

(1) Benign of malaria:-

(i) It is caused by plasmodicum vivax.

(ii) The incubation period is 14 days.

(iii) The recurrence of fever is after every 48 hours.

(2) Quarten Tertian Malaria:-

(i) It is caused by plasmodicum malariae

(ii) The incubation period is 28 days.

(iii) The recurrence of fever takes place every 72 hours.

(3) Mild Tertian Malaria:-

(i) It is caused by plasmodicum ovale.

(ii) The incubation period is 14 days.

(iii) The recurrence of fever takes place every 48 hours.

(4) Malignant Tertian Malaria :-

(i) It is caused by Plasmodium falciparum

(ii) The incubation period is 12 days.

(iii) The recurrence of fever occurs every 48 hours

(iv) In this malaria, the death rate is high.

(5) Qutotidian Malaria :

(i) such kind of malaria occurs when infected by more than one species of plasmodium.

(ii) The fever recurs almost daily.

Treatement:

→ Malaria can be treated by using drugs like chloroquine paludrine, plasmochine etc.

→ Malaria can be prevented by adopting following measures:

(i) using of mosquitonet.

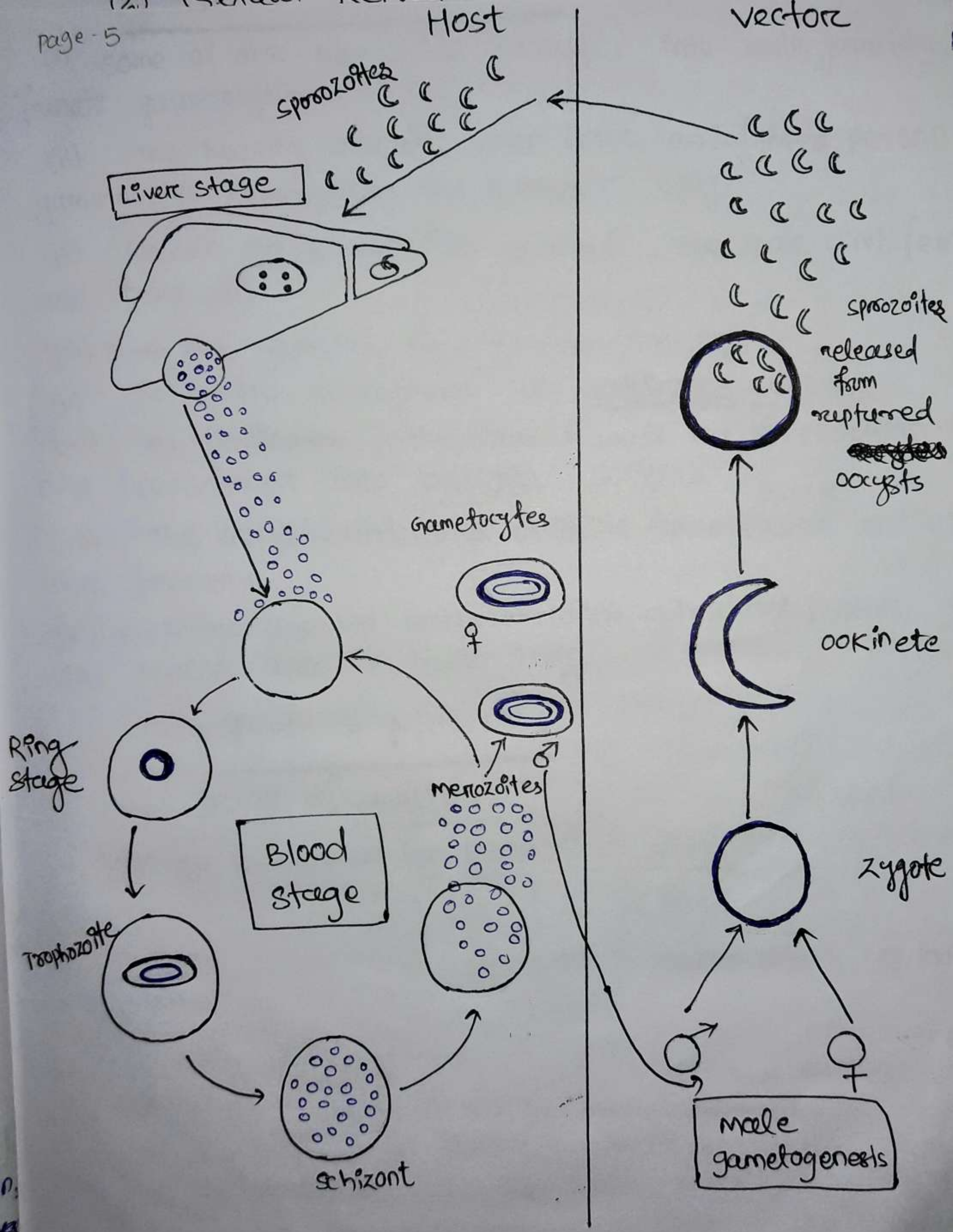
(ii) using antimosquito cream, mosquito repeltent, mustard oil etc.

(iii) The adult anopheles mosquitoes are destroyed by using insecticides like DDT, gammaxene flit etc.

(iv) Mosquito can be killed by fumigation sulpher, tureomphor ~~etc~~, poisonious fumes etc.

(v) Mosquitoes larvae ~~can be~~ are killed by introducing fishes like gambusia, gold fishes, minnows etc.

(vi) The swopy areas, segement water should be drained off to eliminate breeding grounds (place)



(Life cycle of Plasmodium)