



P Ovale Malaria

Why in News

Recently a **not very common type** of malaria, *Plasmodium ovale*, has been identified in a jawan in Kerala.

- The soldier is believed to have contracted it in **Sudan**, where *Plasmodium ovale* is endemic.

Key Points

▪ About:

- *Plasmodium ovale* is **one among the five kinds** of malarial parasites — *Plasmodium falciparum*, *Plasmodium vivax* (the commonest ones), *Plasmodium Malariae*, *Plasmodium Ovale* and *Plasmodium Knowlesi*.
- It is termed ovale as about **20% of the parasitised cells are oval in shape**.
- The parasite can remain in the spleen or liver of the body for a long time, even years, after the mosquito bite, and the person could become symptomatic later.

▪ Symptoms:

- Symptoms include fever for 48 hours, headache and nausea, and it rarely causes severe illness.

▪ Similar to P vivax:

- P ovale is very similar to P vivax and the treatment modality is the same as it is for a person infected with P vivax.
- Distinguishing between P vivax and P ovale may be tricky and can be differentiated only through careful detection.

▪ Prevalence:

- P ovale malaria is **endemic to tropical Western Africa**. It is relatively unusual outside of Africa and, where found, comprises less than 1% of the isolates.
- It has also been detected in the Philippines, Indonesia and Papua New Guinea, but is still relatively rare in these areas.

▪ Transmission in India:

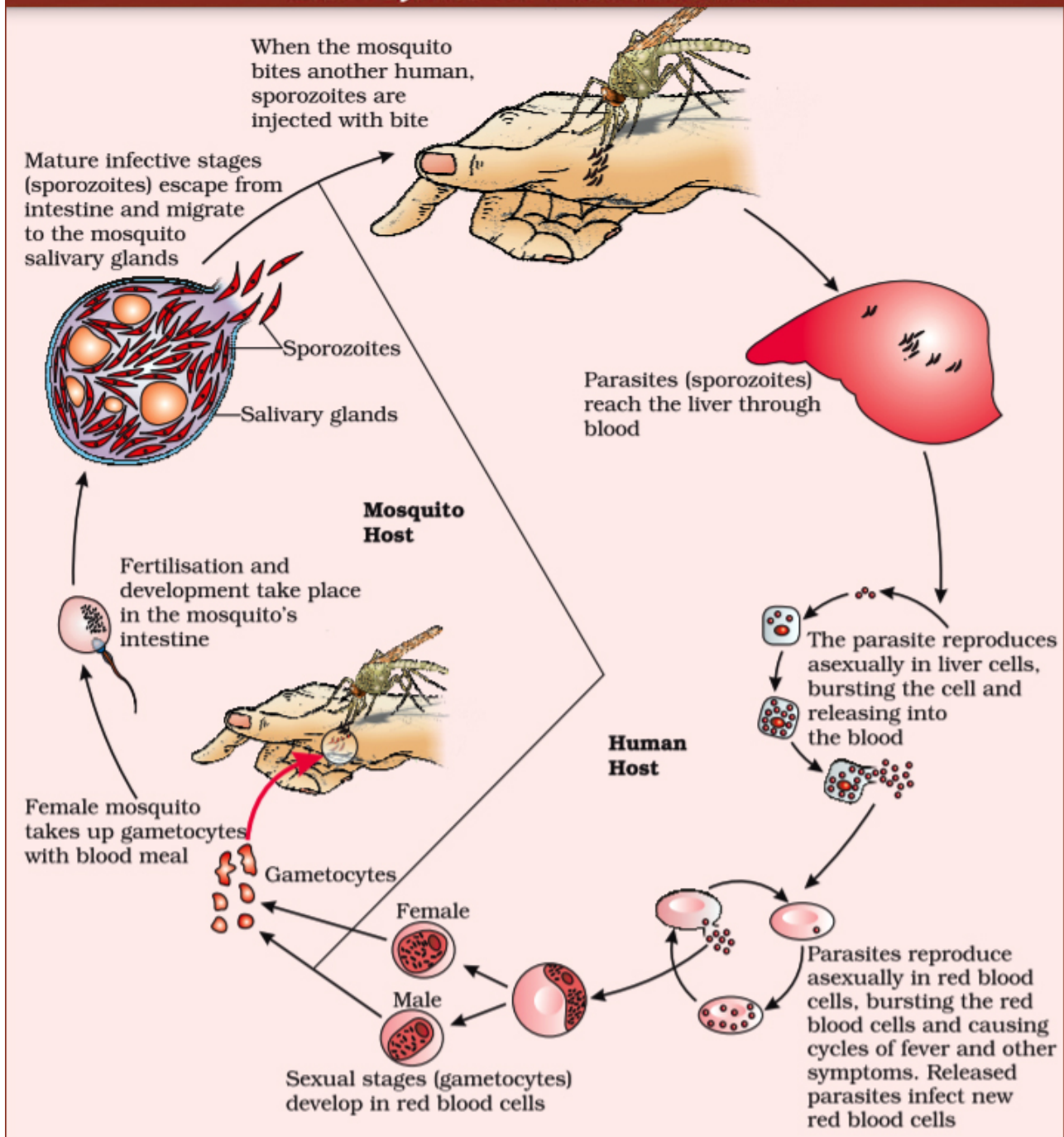
- According to the **National Institute of Malaria Research (NIMR)**, the Kerala case could be an isolated one and there are no recorded cases of local transmission so far.
- Previously, too, isolated cases were reported in Gujarat, Kolkata, Odisha and Delhi. However, **no local transmission has been recorded** — which means these cases have been acquired.
- In India, out of 1.57 lakh malaria cases in the **high-burden states of Odisha, Chhattisgarh, Jharkhand, Meghalaya and Madhya Pradesh** in 2019, 1.1 lakh cases (70%) were cases of **falciparum malaria**.
- According to the recent [World Malaria Report 2020](#), cases in India dropped from about 20 million in 2000 to about 5.6 million in 2019.

Malaria

- Malaria is caused by **Plasmodium (a protozoan)**.
- Malaria caused by **Plasmodium falciparum** is the **most serious** one and can even be **fatal**.
- **Life Cycle of Plasmodium:**
 - Plasmodium enters the human body as **sporozoites (infectious form)** through the bite of infected **female Anopheles mosquito**.
 - The parasites initially multiply within the liver cells and then attack the **Red Blood Cells (RBCs)** resulting in their rupture.
 - The rupture of RBCs is associated with release of a **toxic substance, haemozoin**, which is responsible for the chill and high fever recurring every three to four days.
 - When a female Anopheles mosquito bites an infected person, these parasites enter the mosquito's body and undergo further development.
 - The parasites multiply within them to form sporozoites that are stored in their salivary glands. When these mosquitoes bite a human, the sporozoites are introduced into his/ her body, thereby initiating the events mentioned above.

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Life Cycle of Plasmodium



Note

- It is interesting to note that the malarial parasite **requires two hosts - human and mosquitoes** - to complete its life cycle.
- The **female Anopheles mosquito** is the **vector (transmitting agent) too**.
- **World Malaria Day** is observed on **25th April**.
 - It can be noted that the **World Health Organisation (WHO)** officially endorses disease-specific global awareness days for only four diseases viz. **HIV-AIDS, TB, Malaria, and Hepatitis**.

Source: IE

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