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An Overview On Malarial Parasites And Its Life Cycle

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Abstract:

The present article highlights on the malarial parasites and its life cycle. Malaria is an ancient disease. Research has been going on for a century. When an infected Anopheles mosquito bites a person, that person gets malaria. It is the only mosquito that transmits malaria. Malaria is caused by the Anopheles mosquito biting an infected person. Mosquitoes are infected by feeding on the blood of an infected person containing the parasite. When that mosquito bites another person, that person becomes infected with malaria. According to WHO's 2022 report, the disease caused 608,000 deaths worldwide. For the past few years, research has been going on to take measures for this. The search for anti-malarial drugs is on-going. It is necessary to study malaria parasite which is harmful to human health and human life. From this point of view the malaria parasite and its fatal consequences has been highlighted by the present article.

Keywords: Malarial Parasites, Life Cycle of Malaria Parasite, Types of Malaria Parasites

Introduction:

Malaria is an ancient disease. Research has been going on for a century. The research halted the journey of various discoveries about the malaria parasite and its transmission. In 1880, Laveran was the first researcher to discover parasites in the blood of patients infected with malaria. He was the first person to discover this. Then in 1897, McCullum observed malaria-like parasites in birds. But in 1897 Ross claimed that any malaria parasite, in this case the avian Plasmodium relictum, was transmitted by the bite of an infected mosquito. In other words, he had presented the same conclusion in the case of human malaria. This discovery of Ross is considered to be the most far-reaching discovery, which was often overlooked. This means that a blood-sucking insect can infect others in an infectious manner. Researchers did not believe this. It took a long time for other researchers to understand the universal significance of this discovery. It was only in the first decade of the twentieth century that diseases such as African trypanosomiasis, leishmaniasis, filariasis and loiasis were discovered to be transmitted by the bite of infected insects. Scientists did not miss this discovery. It was then that the story of explaining the complex life cycle of the malaria parasite reached its final stage. Research on such malaria parasites has given a definite direction. It has been reviewed by the present article.

Malaria Parasite Infection:

Malaria is a disease caused by parasites of the genus Plasmodium. Malaria is a disease that occurs after a person is bitten by a mosquito. The disease is contracted when a person infected with malaria is bitten by an Anopheles mosquito infected with the Plasmodium parasite. The female mosquito injects the parasite into the body while taking the blood needed to lay eggs. Malaria is transmitted through it.

Malaria is transmitted to humans by Plasmodium mosquitoes. Malaria can also be spread through blood transfusions. According to WHO's 2022 report, the disease caused 608,000 deaths worldwide. For the past few years, research has been going on to take measures for this. The search for anti-malarial drugs is on-going.

Life Cycle of Malaria Parasite:

The life cycle of the malaria parasite is complex. It mainly consists of two stages. It consists of two stages, the asexual stage in humans and the sexual stage in mosquitoes. First, a female mosquito bites a human. It injects the parasite in the form of sporozoites, which is then transported to the liver via the bloodstream. It is from this that the infection of the malaria parasite starts in the liver. Parasites that develop in the liver have different forms. These parasites can infect red blood cells in the liver. It starts the process of replicating them. When another mosquito is bites a person. Then they go into their bodies and the cycle starts again. The life cycle of such malaria parasite continues.

Types of Malaria Parasites:

There are total five species of malaria parasite i.e. Plasmodium. These single-celled parasites can infect humans with malaria, which can cause serious illness to humans. The first type is falciparum malaria. This parasite can be fatal. Patients with severe falciparum malaria are at risk of liver and kidney failure. In such patients, the liver and kidneys are infected. Sometimes these malaria parasites can remain dormant in the liver for months. Due to which after some time its symptoms reappear in the patient. There are five types of such malaria parasites. They are as follows.

- Plasmodium falciparum (or P. falciparum)
- Plasmodium malariae (or P. malariae)
- Plasmodium vivax (or P. vivax)
- Plasmodium ovale (or P. ovale)
- Plasmodium knowlesi (or P. knowlesi)

Conclusion:

Malaria is a serious disease. Malaria is caused by a parasite called Plasmodium, which is transmitted to humans by the bite of an infected mosquito. There are several species of Plasmodium that cause malaria, but the most dangerous are P. falciparum and P. vivax. It is found in about a hundred countries. This serious disease is also found mainly in poor tropical regions of Africa, Asia and Latin America. African countries are the most affected by this disease. African countries account for 94% of all malaria cases. It can also affect people traveling to these regions. Early diagnosis of malaria is essential. Proper and early treatment reduces the disease. As a result, deaths are preventable. But to reduce the spread of malaria, it is necessary to reduce the existence of the malaria parasite. The life cycle of the malaria parasite must be terminated.

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