



the Anopheles. When the Anopheles bites another human sporozoite are imparted to the human liver and begins the new cycle.

### III. RESISTANCE DEVELOPED BY CERTAIN DISEASES

There are two major genetic factors which are associated with the RBC and provide resistance against malaria. The first genetic factor is the Sickle cell anemia disorder. The Sickle cell anemia provides resistance against malaria [P. falciparum]. The other hemoglobin related disorder such as G6PD, thalassemia and blood cell dyscrasias Also give resistance from the malarial disease in the individual. The another factor is the Blood group system .the person who have negative Duffy blood group system and also resistance to develop malaria by the species plasmodium vivax. [2]

### IV. VACCINE DEVELOPMENT FOR MALARIA

Vaccines are made to stop the proceeding infection of any organism. They are made under 3 categories:

- (1) Attenuated microbe
- (2) Killed microbes
- (3) Protein subunits

#### A. RTS Vaccine

It is most effective and recently developed vaccine. It is a hybrid type of protein particle. It mainly copies the sequence of 4-Amino acid and has shown low efficacy. When immunological analysis is taken into concentration, it develops huge quantity of antibodies.

#### B. Vectored vaccine

It brings cellular level immunity against P. falciparum during reverse stage infection. [3]

There are various chemicals and Anti-malarial drugs which are already developed by different methods. A new approach of combination of chemicals with anti-malarial drugs such as diaminoanthroquinones with Artemisinin and dihydropyridines in combination with mefloquine is imparting new era. [4]

Plasmodium possesses distinct proteins at each stage of life-cycle. It has been established that there is a high coordination of genes throughout the infection process. At every stage, there are divisions of protein's studies: merozoites proteome, trophozoite proteome, gametocyte proteome and sporozoite proteome. [5]

### V. CONCLUSION

As malaria is a leading cause of death in certain countries such as Africa, we need to develop a potential cure for the treatment for the same. It is showing a big fatality rate across the globe. The development in the vaccine is on rapid speed but there are various factors which are to be taken into consideration to find a better solution.

### REFERENCES

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