

Malaria prevention using antibodies: A promising approach to passive protection

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Madam, malaria is a parasitic infection that is one of the leading causes of death in developing countries like Pakistan. According to WHO, an estimated 241 million malaria cases were reported in 2020¹. Vaccines have been developed to prevent malaria but with limited efficacy.

Using next-generation antibodies can be a possible option to reduce malarial infection. Recently, a phase 1 trial conducted by NIAID at the National Institute of Health (NIH), USA, clinical centre has reported promising results with using intravenous and subcutaneous antibodies for malaria prophylaxis in healthy adults².

Chemoprophylaxis drugs like chloroquine, mefloquine, and atovaquone/proguanil has been used for malaria in Pakistan, but it has led to the generation of drug-resistant strains³. WHO approved a subunit vaccine for children in 2021 but it has limited efficacy and risk of severe side effects⁴. Considering these aspects, the use of monoclonal antibodies may be a practical step toward decreasing the number of malaria cases. The trial demonstrated that using antibodies in adults who had not had malaria or received a vaccine previously was associated with substantial passive immunity. The immunity was tested after exposing the participants to controlled human malaria infection. Parasitaemia, as determined by PCR, developed in all 6 participants from the control group, while only two out of 17 participants from the

intervention group showed parasitaemia².

Pakistan reports malaria cases throughout the year, with most cases occurring in the summer⁵. Using antibodies for malaria can help advance protection in countries like Pakistan with seasonal transmission. Although, the economic cost of using this intervention must be considered especially for developing countries.

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