

Combating chikungunya in Pakistan: The critical need for vaccine deployment

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Dear Editor,

Chikungunya virus (CHIKV), a vector-borne alphavirus, was first discovered in 1952 during an outbreak in Tanzania, with manifestations as a self-limited disease to a debilitating arthritic disease (1). This virus has become an increasing threat globally, particularly in the tropical regions, and its infection is frequently misdiagnosed because its symptoms are similar to those of other arbovirus-related illnesses, such as dengue fever and Zika virus disease (2).

CHIKV infection is characterized by an abrupt onset of fever, frequently associated with joint pain. Other less common symptoms can include severe polyarthralgia and arthritis, rash, muscle pain, and headache. The acute phase of CHIKV infection typically resolves within weeks, but some patients have to endure persistent joint pain for months or even years afterward (3). Climate change is worsening the incidence of vector-borne diseases, and the emergence of new CHIKV strains could cause severe outbreaks, putting additional pressure on already fragile health systems in developing countries such as Pakistan (4), where the first human case was recorded in 2011 in Lahore (5).

The European Centre for Disease Prevention and Control estimates 320 000 CHIKV cases and over 120 deaths due to chikungunya between June 2023 and June 2024 globally (6). Most of these cases were in Brazil (317 563), Paraguay (3034), Argentina (623), and Bolivia (346). Apart from America, cases were reported in Asia, including Pakistan (459), Maldives (389), India (225), Thailand (221), Timor Leste (195), and Malaysia (25). Senegal (7 cases) is the only African country that has reported CHIKV in 2024. Although Europe has favourable environmental conditions for vector activity and virus replication, it has not reported any case, however, the risk of transmission to continental Europe is high (6).

Prevention remains paramount: using insect repellent, wearing protective clothing and using permethrin-treated gear can reduce mosquito bites, just as sleeping under a mosquito net can mitigate the risk of infection. Vaccination is currently advised for travellers visiting areas prone to CHIKV outbreaks, including older adults and those with underlying health conditions, given the potential severity of CHIKV symptoms and complications (7).

The recent approval of Ixchiqui, the first CHIKV vaccine available only in the United States, by the United States Food and Drug Administration marks a significant milestone. Targeting individuals aged 18 and above, particularly those at high risk of exposure, this vaccine offers crucial protection against CHIKV (8).

In Pakistan, where CHIKV outbreaks have been reported, urgent measures are needed to integrate CHIKV vaccination into the national immunization programme. Such proactive step could reduce disease spread, ease the burden on healthcare resources, and protect public health. It is crucial for governments and health authorities to prioritize the introduction of CHIKV vaccine, which is currently not available in Pakistan, to ensure accessibility and affordability for all vulnerable populations in the country. Alongside vaccination efforts, it is essential to conduct awareness campaigns in communities to educate and involve the public in prevention efforts.

Tackling CHIKV in Pakistan needs urgent and thorough actions, including the use of vaccines, educating the public and improving healthcare infrastructure. By taking decisive steps now, we can mitigate the impact of CHIKV outbreaks and protect the health of our communities.

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