The spread of suffering: Chikungunya's toll in Pakistan

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Dear Respected Editor, Chikungunya virus (CHIKV), a positive-sense single-stranded RNA virus belonging to the Togaviridae family and Alphavirus genus, is the causative agent of Chikungunya fever. Transmission primarily occurs through bites from Aedes albopictus or Aedes aegypti mosquitoes. The first recorded outbreak occurred in 1952 on the Makonde Plateau, near the Tanzanian-Mozambique border, with the term "Chikungunya" originating from the Mokonde language, meaning "contorted or bent appearance."[1]

Since its initial emergence, Chikungunya has been documented in over 60 countries, predominantly in tropical and subtropical regions. The disease is characterized by non-fatal symptoms including high fever, severe joint pain (arthralgia), myalgia, nausea, headaches, fatigue, and occasionally a rash.[1] In endemic areas, Chikungunya often goes undiagnosed due to its nonspecific symptoms and relatively mild course.

In Pakistan, the history of Chikungunya dates back to the early 1980s when antibodies against the virus were first detected in rodents and subsequently in humans. Despite this early identification, significant outbreaks were not reported until more recent years. Following a dengue outbreak in 2011, the first confirmed cases of Chikungunya were reported in children in 2015.[2,3]

A study investigating evolutionary changes and genetic diversity of CHIKV in Pakistan from 2016 to 2018, using the Centres for Disease Control and Prevention (CDC) Trioplex Protocol, found a notable prevalence rate. Out of 1549 samples tested, 50% were positive for CHIKV RNA, with the majority of cases occurring in individuals aged 21-40.[4] Health authorities in Karachi estimate more than 30,000 cases, with nearly 4,000 confirmed via qualitative RT-PCR at the Armed Forces Institute of Pathology and the National Institutes of Health. The city's warm climate and inadequate sanitation contribute to the persistent mosquito breeding grounds.[5]

To address the escalating Chikungunya infections in Pakistan, urgent measures are recommended:

1. Mosquito Control by elimination breeding sites such as stagnant water in containers, apply larvicides, and use mosquito repellent.
2. Personal Protection through protective clothing, use mosquito nets, and apply repellents to exposed skin.
3. Install screens on doors and windows, and use air conditioning where possible.
4. Launch initiatives to educate communities on mosquito control and public health practices.
5. Avoidance of areas experiencing Chikungunya outbreaks and employ strict mosquito bite prevention measures.
6. Advocate for the development and deployment of effective vaccines accessible to both rural and urban populations.

In conclusion, concerted efforts are necessary to mitigate the impact of Chikungunya in Pakistan through comprehensive mosquito control, public education, and accessible vaccination strategies.

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