Chikungunya Threat in Dengue Hit Areas.

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The global tricky behavior of weather has taken along Pakistan, as well as other Asian countries, leading to substantial climate changes. With every passing year, summers are getting harsher, whereas the winters are getting milder. The outbreak of arboviral illnesses, in areas of comparatively low temperature, during summer, has been nurtured by rise in temperature. The deplorable hygienic conditions and lake of awareness among general public in most Asian countries further adds fuel to the fire by providing excellent breeding grounds for the arthropod vectors.

The first suspected dengue-like epidemics were reported in 1635 in Martinique and Guadeloupe and in 1699 in Panama; however, it is difficult to attribute these outbreaks to dengue without a detailed clinical picture[1,2]. Although the etiology of the first reported outbreaks is unknown, the description of the 1780 Philadelphia outbreak in the United States by Benjamin Rush is clearly the Dengue Fever syndrome caused by dengue viruses[3]. Dengue outbreaks were commonly reported in port cities of the Caribbean, North, Central, and South America in 19th century [4]. A dengue-like disease outbreak in Peru accounted for ~50,000 cases followed by an extended outbreak involving the Caribbean and the Gulf of Mexico was reported in 1818 to 1827[5]. The outbreak further extended to Cuba, Jamaica, Colombia, Venezuela, some port cities in the southern United States (New Orleans, Pensacola, Savannah, and Charleston), and Mexico[6].This outbreak was originally described as dengue, the clinical characteristics of the cases were classic chikungunya disease, strongly suggesting that its cause was chikungunya virus. The historical record later suggested as the sole introduction of chikungunya into the American Region as a consequence of the African slave trade[7].

In Pakistan, dengue was first detected in 1994 in Karachi (southern part of Pakistan) and till October 2014, 48910 cases of dengue were recorded in Pakistan with 566 deaths[8]. Several devastating outbreaks occurred during this period, but the first deadly outbreak was reported in Lahore (eastern part of Pakistan) in 2011, where 21,685 cases with 350 deaths were recorded. Unprecedentedly, just one year after the major outbreak in Lahore, another massive outbreak (6,000 confirmed cases with 48 deaths) was recorded in the northern part of Pakistan i.e. district Swat of Khyber Pakhtunkhwa (KPK)[9].

Chikungunya is another arboviral disease, caused by chikungunya virus, which is transmitted through the bites of infected Aedes mosquitoes (Aedesaegypti and Aedesalbopictus). The same vectors which are responsible for transmission of Dengue fever (DF). The virus is transmitted from human to human by the bites of infected female mosquitoes. These mosquitoes can be found biting throughout daylight hours, though there may be peaks of activity in the early morning and late afternoon. Both species are found biting outdoors, but Aedes. aegypti may also readily feed indoors. The disease shares some clinical signs with dengue, and can be misdiagnosed in areas where dengue is common. It is characterized by an abrupt onset of fever followed by severe polyarthralgia. Other common symptoms include rash, headache, nausea, fatigue, and myalgia. Although the illness is self-limiting, joint pain can persist for months and even several years in some cases.

Most patients recover fully, but in some cases joint pain may persist for several months, or even years. Occasional cases of eye, neurological and heart complications have been reported, as well as gastrointestinal complaints. Serious complications are not common, but in older people, the disease can contribute to the cause of death. Often symptoms in infected individuals are mild and the infection may go unrecognized, or be misdiagnosed in areas where dengue occurs.

Recently almost same pattern of symptoms are noted in various parts of Mingora city, District Swat patients complaining of high grade fever, body aches with joint pains. Since the area had already had a span of Dengue outbreak[10], confirming the presence of the same vector, it is very important to focus on the issue so that timely management can be done . Presently, no vaccines or specific antivirals have been approved for chikungunya fever. The best possible modality is to eradicate vector and

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educate common masses about its spread, care and course of management.

The proximity of mosquito vector breeding sites to human habitation is a significant risk factor for chikungunya as well as for other diseases that these species transmit. Prevention and control relies heavily on reducing the number of natural and artificial water-filled container habitats that support breeding of the mosquitoes. This requires mobilization of affected communities. During outbreaks, insecticides may be sprayed to kill flying mosquitoes, applied to surfaces in and around containers where the mosquitoes land, and used to treat water in containers to kill the immature larvae.

For protection during outbreaks of chikungunya, clothing which minimizes skin exposure to the day-biting vectors is advised. Repellents can be applied to exposed skin or to clothing in strict accordance with product label instructions.Repellents should contain DEET (N, N-diethyl-3-methylbenzamide), IR3535 (3-[N-acetyl-N-butyl]-aminopropionic acid ethyl ester) or icaridin (1-piperidinecarboxylic acid, 2-(2-hydroxyethyl)-1-methylpropylester). For those who sleep during the daytime, particularly young children, or sick or older people, insecticide-treated mosquito nets afford good protection. Mosquito coils or other insecticide vaporizers may also reduce indoor biting[11].

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