THE CURRENT SURGE IN DENGUE VIRUS INFECTIONS IN PAKISTAN AND ITS POSSIBLE CAUSES AND EFFECTS

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Background

The causative agent of dengue disease is an RNA virus which is single stranded. Actually dengue viruses can be categorized into a group of four viruses that are similar in many aspects but have obvious antigenic differences hence DEN-1, DEN-2, DEN-3 and DEN-4 are the viruses. Dengue disease is an acute febrile disease (Gubler, 1998). Dengue disease is not limited to any country, the cases can be found almost everywhere in the world but the cases are mostly seen in Asian countries especially tropical and sub-tropical regions. Initial symptoms are like an ordinary flu, however as the disease progresses, it results in severe complications leading to the death of the patients. Dengue has remained endemic in Pakistan for quite of sometime and is associated with high morbidity and mortality. That is why it considered being the most important human arboviral disease (Zubair et al, 2016; CDC, 2021; Hasan et al., 2016; Arunachalam et al., 2008).

Genus Aedes of the mosquitoes is the most important vector in the transmission of dengue. Aedes aegypti lives in habitats near human population (Arunachalam et al., 2008; Wang et al., 2000; Twiddy et al., 2002) from 2010 onwards Dengue fever has caused an epidemic in Pakistan, with 16,580 confirmed cases and 257 deaths in the city of Lahore. The rest of the
country reported nearly 5000 cases and 60 deaths (WHO). Pakistan is also facing the immense burden of Covid-19 as rest of the world. At present Pakistan has recorded 1270,000 cases and 28,280 deaths so far (https://covid.gov.pk). Now presently in September and October of the month Pakistan witnessed a drastic increased in the dengue cases which have certainly overburdened the already choked health system due to pandemic.

Main Text

For the previous 30 years, Pakistan has been endemic for dengue virus. According to the Ministry of National Health Services, Regulations, and Coordination, the number of dengue cases nearly tripled from 3,204 (2018) to 47,120 (2019), nevertheless the true figure is predictable to be considerably higher. Likewise, in 2020, 416 confirmed dengue cases have been reported, far earlier than the peak season during the post-monsoon months (Pakistan, 2020). Dengue has appeared much earlier than its usual seasons in 2015-2019. Total estimates of cases were about 90,400 cases and 169 deaths during the said season. Pakistan has a very delicate and already overburdened health care system. Things that need to be done are to execute a rigorous surveillance of existing endemic diseases such as dengue and to make an effective control program for the eradication of these diseases. There is a need to equip the health care system with sophisticated modern tools to detect earlier than the outbreak (Rana et al., 2021). In 2021, the virus has resurfaced again causing a major outbreak in the cities of Lahore and Rawalpindi. Among the 820 cases 687 belongs to Lahore alone. And it seems to be that the outbreak is just about to gain its full swing. The health experts have found an increased number of dengue larvae in different parts of the city of Lahore (Rising cases, 2021). On Wednesday alone, at least 126 people tested positive for dengue, indicating that matters could spiral out of control if effective preventive measures are not taken immediately. The possible reasons for this surge can be attributed to more rains than normal in September, October, Lack of surveillance and focus on dengue due to ongoing pandemic and due to circulation of all types of dengue virus (DENV) serotypes.

Conclusions

Pakistan is endemic for Dengue virus infections and related disease. Year 2021 has witnessed a sudden uprising in cases in the months of September and October. A country with limited health resources and already overburdened health system due to Covid-19 pandemic can
face severe difficulties in coping with the sudden rise of the dengue cases. Health authorities are required to enhance Mosquitoes control programs, initiate active surveillance programs and research activities to combat the deadly disease. World health organization must also help Pakistani authorities to control and contain Dengue in Pakistan.

References


Pakistan real time & worldwide situation of Covid 19 available at [https://covid.gov.pk](https://covid.gov.pk)


