International Journal of Community Medicine and Public Health
Varghese B et al. Int J Community Med Public Health. 2020 Aug;7(8):3307-3308
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040
DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20203419

Letter to the Editor

Trend of dengue fever in COVID-19 period: observation from Kerala, India

Sir,

The surge of dengue fever cases occurring in the rainy season is the usual scenario as the mosquito breed in the stagnant water collection after the rain.[1] The peak of this hyper-endemic usually occur in the months of June to September in Kerala.[2]

Dengue virus infection is a major public health problem which may manifest symptoms ranging from mild illness to complications like dengue hemorrhagic fever or dengue shock syndrome. The intrinsic incubation period of dengue fever ranges from 3-14 days. The female aedes mosquito bite the host during the viremic phase (from 2 days prior to onset of fever to 5 days after the onset of fever) may transmit the disease.[3] The spread of dengue in tropical areas will be influenced by many factors like rainfall, relative humidity, temperature and unplanned urbanization.[4]

Dengue virus, a member of *Flaviviridae* family is one of important mosquito borne infections affecting human beings. The infection caused by any one of the 4 serotypes, namely DENV-1, DENV-2, DENV-3, DENV-4. Infection from one serotype may cater partial or temporary immunity to another serotype of the Dengue virus.[4]

Owing to the changed scenario of COVID-19 pandemic and the measures like lockdown in Kerala, vector borne disease prevention activities were difficult during this season. In this context, an analysis seems imperative observing the change in the seasonal trend in Dengue fever occurrence in Kannur District, Kerala.

A record based descriptive study was undertaken to observe the trend of dengue fever in COVID-19 period. The details of patients who were clinically diagnosed and positive for either dengue NS1 antigen or IgM antibody were collected from the regional prevention of epidemic and infectious disease cell (regional PEID cell) records available at Government Medical college Kannur. The data from January 2017 to 15 June 2020 (41½ months) were collected during the study period of 2 weeks.

In the 3 years and 5½ months study period, a greater number of cases (44.34%) were reported during the year 2019 followed by 2018 (12.01%) and also 38.34% from 2020 January to 15th June 2020. The trend of dengue fever infections peaks after the month of May (Figure 1).

During the initial months till the month of May, only minimal number of cases (<20 cases) had occurred in each year. But the scenario has changed in the present year 2020.

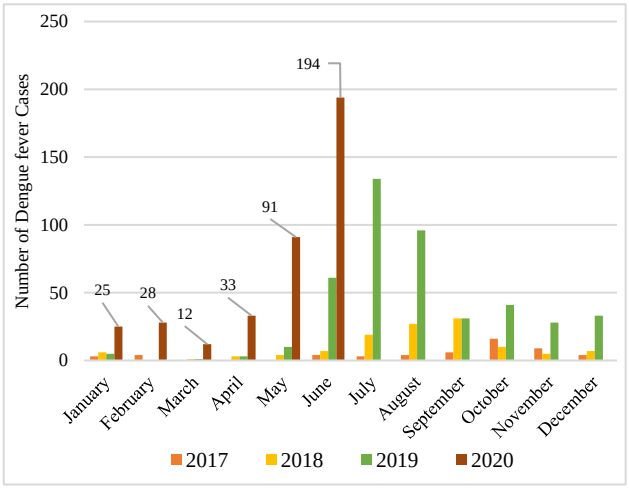

Figure 1: Month wise reported dengue fever cases from January 2017 till 15th June 2020.

Total number of cases in each month till the month of June remain less than 10 between 2017 and 2019. On contrary to this, the month of May in 2020 had reported 91 cases which is about 9 times higher than previous year. A total of 383 cases occurred till 15th June 2020 and the usually reported peak is yet to happen.

In our study, about 45% of the dengue (283 cases) occurred during the months of July and August from 2017 to 2019. A study in Tamil Nadu by Vijayakarthikeyan.[5] showed an increase of cases after the month of June and a greatest number of cases during rainy season (September-November).

As the greater number of the dengue fever cases occur in the post monsoon period, this year also have a huge number of cases. In addition, there is a chance of greater number of cases due to lock down during this period. A surge of cases reported during the initial months in 2020 poses the possibility of lock down impact related to COVID control.

Vigilance of dengue control has to be recaptured along with COVID-19 control. The surveillance unit has initiated the program. Spot map is prepared to identify priority areas. On line training is conducted to local teams

including health care workers, local self-government members and volunteers. They have initiated preventive measures like source reduction, indoor spray and personal protective measures. Child to child program is envisaged through on line. These innovative approaches may help to reduce the incidence of dengue fever along with COVID-19 control.

ACKNOWLEDGEMENTS

The authors gratefully extend all the support extended by the faculties, junior residents and interns posted in the department of community medicine department, Government Medical College Kannur, Pariyaram, Kerala, India.

Basil Varghese*, Jayasree Anandabhavan Kumaran

Department of Community Medicine, Government Medical College Kannur, Pariyaram, Kerala, India

***Correspondence to**
Dr. Basil Varghese,
E-mail: basilvarghese2019@gmail.com

REFERENCES

1. Goswami S, Jha A, Siven SP, Mundra A, Gupta SS, Dambhare D, et al. Outbreak investigation and containment measures of dengue fever in rural Wardha: A field epidemiological Study. Int J Adv Med Res. 2019;6(1):32–6.
2. Rajesh TP, Vani S, Faisal KA, Shailaja TS. Trend in Sero-Prevalence of Dengue Infection in Rural Kerala, India. Int J Curr Microbiol Appl Sci. 2018;7(08):249-56.
3. Ganeshkumar P, Murhekar MV, Poornima V, Saravanakumar V, Sukumaran K, Anandaselvasankar A, et al. Dengue infection in India: A systematic review and meta-analysis. PLoS Negl Trop Dis. 2018;12(7):2-3.
4. Cogan JE. Dengue and severe Dengue. World Health Organization. 2020. Available at: https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue. Accessed on 3 June 2020.
5. Vijayakarthikeyan M. Frequency and trend of dengue fever in a tertiary care hospital in Kancheepuram, Tamilnadu: three-year retrospective study. Int J Community Med Public Heal. 2020;7(3):1017-21.

Cite this article as: Varghese B, Kumaran JA. Trend of dengue fever in COVID-19 period: observation from Kerala, India. Int J Community Med Public Health 2020;7:3307-8.