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Original Article

What is New About Dengue Fever? — An Editorial

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Dengue fever is a major global public health concern, particularly in tropical countries where the environment supports the growth and spread of the mosquito- Aedes aegypti, the primary vector of dengue fever. According to World Health Organization (WHO), between 50 and 100 million dengue cases are reported globally each year[1,2]. Approximately 40% of the global population is at risk of contracting dengue, with the disease being endemic in over 100 countries. Rapid urbanization, inadequate infrastructure, and population behaviors favour significantly to the spread of dengue, resulting in an increase in cases and the rising frequency of epidemics, typically occurring in cycles every 3–5 years[3]. In Bangladesh, due to climate change, increasing temperature across the country, changing rain patterns, unplanned urbanization, rapid population growth, and inadequate sanitation have created a suitable environment for the breeding of dengue-carrying Aedes mosquitoes and this year there is a severe outbreak of dengue before the monsoon season[4,5]. Total dengue cases from 1st January till date are 85712 and total death is 448. Dengue fever is caused by dengue virus, an arbovirus and it has four distinct viral serotypes—DENV-1, DENV-2, DENV-3, and DENV-4. Dengue virus is transmitted by Aedes aegypti mosquito mainly, but Aedes albopictus may also transmit dengue virus. Aedes aegypti mosquitoes live in the high rise building in urban area and lay their eggs in clean stagnant water collected in vases, unused pots, any containers, flower tubs, plastic containers, abandoned tyres, plastic drums, earthen pots, tin cans, tin shells, containers, mats, battery shells, polythene/chips packets[6]. They usually bite at dawn and dusk. Dengue virus enters the human body through the bite of Aedes aegypti mosquito. If a person is bitten by a dengue infected mosquito, the person becomes infected with dengue fever within 4 to 6 days. If this infected person is bitten by an uninfected Aedes mosquito, that mosquito becomes infected. In this way, dengue spreads from one person to another through mosquitoes. People living in the elite areas of urban are more affected than people living in slums or villages. Common features of dengue fever are fever, severe bodyache, severe retroorbital pain and rash. As dengue virus has 4 serotypes, so dengue fever can be 4 times. People who have been infected with dengue fever are at risk of having severe dengue the next time they get it. Life-threatening features such as dengue haemorrhagic fever and dengue shock syndrome may occur, but their incidence is low. In most cases dengue fever does not require much testing, which is a waste of money. The timing of the after 1-2 days of fever and anti-dengue antibody after 4-6 days[7]. Blood platelet count starts to decrease 4 or 5 days after onset of fever, so blood CBC and platelets clinical presentation

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Influences the test selection[8]. Dengue NS-1 antigen can be done should be checked after 4 or 5 days. If done earlier, the report is normal and many may get confused. As dengue is viral, there is no specific treatment for dengue fever; treatment is given according to the symptoms such as paracetamol if temperature is high, but no other pain medication like NSAIDs can be taken at all because they will increase the risk of bleeding. Plenty of water and fluids should be consumed. If certain symptoms like low platelet count, bleeding from any part of the body, decreased urine output, jaundice, excessive fatigue or weakness, severe abdominal pain or vomiting appear, consult a doctor immediately. Blood transfusion is not needed if there is no bleeding and the patient's blood hemoglobin is normal, even in dengue hemorrhagic fever. There is no need for platelet transfusions in most cases as platelets begin to decrease after 4 or 5 days of fever and then, they start to increase after 2-3 days without any treatment. Blood and platelet transfusion are required in dengue hemorrhagic fever and IV saline for dengue shock syndrome. As time goes, Aedes mosquito has changed its character; it was once thought that mosquitoes lay their eggs in clean water, now it can be seen that eggs are laid in impure and salty water; earlier, Aedes mosquito used to bite only during the day, now it bites all the time; dengue is associated with rainfall, the incidence of dengue increases in June-July due to high rainfall, however, in the past few years, dengue patients have been found throughout the year. These changes have rung the bell. As the Aedes mosquito has changed its character, the symptoms of dengue fever have also been changed. Conventional symptoms of fever, headache, bodyaches and rash are not observed, symptoms like common cold, runny nose, cough, headache, sore throat are found. Most of the time, the patients and even doctors mistake it for common cold and delay in getting proper treatment. As a result, many patients' conditions suddenly deteriorate before they know it. The patient has no pulse, low blood pressure, no urination, and even the patient may become unconscious. This is called dengue shock syndrome, it is the worst, one of the causes of death in dengue. Most patients who have previously been infected with dengue develop dengue shock syndrome after their second, third or fourth exposure. As no vaccine has been discovered that works against all four serotypes of dengue viruse, the key to prevent dengue fever is to prevent the spread of Aedes mosquitoes and prevent these mosquitoes from biting. This can be accomplished by removal of stagnant water from container in household and environment every 3 to 5 days to prevent breeding of mosquitoes, killing the mosquitoes by spraying insecticides and preventing biting by taking personal protection.

REFERENCES

1. *Centers for Disease Control and Prevention. Dengue homepage. (acessado em 12/Set/2012)*
2. *World Health Organization. Dengue: guidelines for diagnosis, treatment, prevention and control - new edition. Geneva: World Health Organization; 2009*
3. *Neiderud CJ. How urbanization affects the epidemiology of emerging infectious diseases. Infection ecology & epidemiology. 2015 Jan 1;5(1):27060.*
4. *Bhowmik KK, Ferdous J, Baral PK, Islam MS. Recent outbreak of dengue in Bangladesh: A threat to public health. Health Sci Rep. 2023;6(4):e1210.*
5. *Kamal ASMM, Al-Montakim MN, Hasan MA, Mitu MMP, Gazi MY, Uddin MM, et al. Relationship between Urban Environmental Components and Dengue Prevalence in Dhaka City-An Approach of Spatial Analysis of Satellite Remote Sensing, Hydro-Climatic, and Census Dengue Data. Int J Environ Res Public Health. 2023;20(5):3858.*
6. *Ferdousi F, Yoshimatsu S, Ma E, Sohel N, Wagatsuma Y. Identification of Essential Containers for Aedes Larval Breeding to Control Dengue in Dhaka, Bangladesh. Trop Med Health. 2015;43(4): 253-64.*
7. *Louten J. Detection and Diagnosis of Viral Infections. Essential Human Virology. 2016:111-32*
8. *Andrew A, Navien TN, Yeoh TS, Citartan M, Mangantig E, Sum MSH, et al. Diagnostic accuracy of serological tests for the diagnosis of dengue and Chikungunya virus infection: A systematic review and meta-analysis. PLoS Negl Trop Dis. 2022;16(2):e0010155*