Editorial

Dengue: A Reemerging Disease Posing a Threat to us

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The first supposed outbreaks of 'dengue-like disease' were defined in 1635 in Martinique and Guadeloupe and 1699 in Panama; but reports of illnesses well-matched with dengue fever occurred even earlier. The records of spread of dengue by A. aegypti mosquitoes was done at the beginning of 19th century. Now this virus is blamable for causing more illness and death than any other arbovirus illness in humans. This upsurge in occurrence is attributed to the following four major factors: (1) unusual growth of the world population; (2) lack of an active mosquito control plan in dengue-endemic areas; (3) augmented travel by airplanes; and (4) worsening of public health substructures in the underdeveloped or developing countries over the last 30 years.[1] The powerful outcomes of dengue virus infection include shock, hemorrhage, and major organ failure; but the incidence of these signs varies, and role of existing anti-dengue virus antibodies, virus features, and host factors are not clear. Consistent picture of the epidemiology of severe dengue first depends on the use of firm images of disease severity.[2] The first clinical case report dates from 1789 of 1780 epidemic in Philadelphia is by Benjamin Rush, who created the term "break bone fever" for the symptoms of myalgia and arthralgia. The term dengue fever came into general use only after 1828.[3]

The dengue epidemic was first seen in the 1780 s, mainly in Asia, Africa, and America; on the other hand, this virus was found in Bangladesh in 1964. Dengue is one of the protuberant public health concerns in tropical and subtropical counties globally. Fast and unplanned urbanization, global warming, and lengthy rainy season supported dengue outbreaks in recent years in Bangladesh. Moreover, household hazards add to generating an increased number of Aedes mosquitoes.[4] From 1 January to 7 August 2023, the Ministry of Health and Family Welfare of Bangladesh described a total of 69 483 laboratory-confirmed dengue events and 327 deaths, with a case fatality rate of 0.47%. Of these, 63% of cases and 62% of the deaths were reported in the month of July 2023. Though dengue is endemic in Bangladesh, the current dengue flow is exceptional in terms of seasonality and the initial sharp rise in comparison to previous years, where the surge started around -late June. The case fatality rate so far that year was relatively high compared to previous years for the full-year period. The pre rainy season Aedes survey displays that the density of mosquitoes, and the number of possible hotspots is at the peak in the past five years. The higher incidence of dengue is taking place in the perspective of an uncommon periodic amount of rainfall, joint with elevated temperatures and excessive humidity, which have developed in an increased mosquito population all over Bangladesh.[5]

Dengue can vary from asymptomatic infection to severe disease. An estimated 1 in 4 dengue virus infections are symptomatic. Symptomatic dengue virus infection most usually presents as a mild to moderate, nonspecific, acute febrile ailment. Infection with one of the four dengue viruses will bring long-lived immunity for that specific virus. As there are four dengue viruses, people may be infected with dengue virus many times in their life. Approximately 1 in 20 patients with dengue virus disease progress to develop severe, life-threatening disease called severe dengue. The second infection with dengue virus is a risk factor for severe dengue. Clinical features include nausea, vomiting, rash, aches and pains, a positive tourniquet test, leukopenia, thrombocytopenia and the following threatening signs: abdominal pain or tenderness, persistent vomiting, clinical fluid accumulation, mucosal bleeding, lethargy, restlessness, and liver enlargement. The occurrence of a warning sign may forecast severe dengue in a patient. Severe dengue is described by dengue with any of the following symptoms: severe plasma leakage leading to shock or fluid accumulation with respiratory distress; severe bleeding; or severe organ impairment such as elevated transaminases ≥1,000 IU/L, impaired consciousness, or heart impairment.[6]

Dengue fever is well-known to us for about 2 decades. The effect of the illness due to Dengue on our health care system has made it very acquainted in our society. The disease is to a great extent connected to our environment, economy and national policy. Disease Control Division of Directorate General of Health Services felt the need of developing national guideline in 2000 for the clinical management of dengue by tailoring the SEARO/ WHO guidelines in accordance with the usual local situation for providing appropriate management for dengue patients to alleviate the morbidity, prevent unfortunate mortality and raise alertness for appropriate prevention and control in community. Disease Control Division of DGHS, Ministry of Health and Family welfare in alliance with World Health Organization local office conducted series of meetings, group discussion and draft presentation by a group of Physicians, Pediatricians, Microbiologist, Gynecologists and Entomologists for updating of national guideline. The guideline will serve to the need of the physicians at all levels in clinical management of Dengue.[7]

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