Dengue fever: The global emerging threat

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Dengue is a mosquito born viral illness widely prevalent in tropical and sub-tropical areas of the world primarily in Urban and sub urban settings[1]. Dengue fever severe epidemics was limited to less than ten countries half a century back but currently half of the world population is now at risk particularly in Latin America, Western Pacific and South East Asia[2]. Largest number of cases ever reported was in 2019 and seventy percent of them occurred in Asia. Pakistan, as located in sub topical area is also experiencing frequent outbreaks of dengue in its major cities since 2005. Largest one occurred in Lahore in 2011 in resulting in 257 deaths[3].

There are four serotypes. Infection with one of serotype confers lifelong immunity to that specific type only. Secondary infection can occur with other serotypes. Risk of developing severe dengue increases with secondary infections[4]. One in four people will get sick with virus and disease is usually limited to a week. Dengue fever is flu like illness presenting with severe headache, myalgias and rash. After 3 - 7 days, some patients can enter into critical phase leading to leakage of plasma and accumulation of fluids in third space cavities, bleeding, acute respiratory distress syndrome and multi organ failure. Platelets can even fall below 20,000[5]. Several methods can be employed to diagnose dengue fever. Virological tests that detects antigen of the virus during first five days and through detection of antibodies during further course of illness.

There is no definite treatment for dengue; symptoms can be relieved by paracetamol. Patients with persistent abdominal pain, bleeding and respiratory difficulties need to be closely monitored. Although severe dengue can be life threatening within hours, maintenance of body fluid status by fluid therapy will avoid many serious complications. Severe dengue fever mandates in hospital treatment by doctors experienced in management of its complication. Early recognition of patients with severe dengue and specialized treatment can reduce mortality to less than 1%[5].

Control of vector is cornerstone to prevent spread of the virus. Man-made water containers are breeding places for the Aedes aegypti mosquitoes. Proper solid waste disposal and eliminating water holding man made habitat can prevent spread of vector. Personal protection measures like long sleeves, insect repellent and window screens should be observed to avoid mosquito bite. Educating community about mosquito borne illnesses and engaging them to become part of the prevention campaign is integral for sustained vector control[5]. Vaccine against dengue is available since 2015 but current recommendations are only for the people age 9 to 45 of years, living in endemic areas and had prior history of dengue infection[6].

Global warming, unplanned urbanization and export of viruses from endemic countries to the world by travelers have made dengue fever as a global emerging threat also pointed out by Gwee[7]. Collaborative efforts for prevention, control, Lab diagnosis and treatment are needed to combat this menace.

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