Dengue Disease Awareness and Prevention Campaign

August 6, 2019

A Joint Statement of the Philippine College of Physicians (PCP) and the Philippine Society for Microbiology and Infectious Diseases (PSMID)

Dengue remains a public health problem in the Philippines. The country is hyperendemic for dengue with an incidence rate of 3,000-5000/100,000 population.

Reported cases of and deaths from dengue have been increasing since 2017. This year from January to June 2019, DOH reported a total of 106,630 cases with 456 deaths---an 85% increase from the 57,564 cases reported over the same period in 2018. The Philippines' 5-year average case fatality rate (CFR) is at 0.55% of which children 0-4 years old and 5-14 years old consistently has the highest CFR. While countries in the Western Pacific Region aim to reduce dengue CFR to less than 0.1%, the Philippines' CFR ranks third, after Brazil and Indonesia, with the greatest number of reported dengue deaths from 2011-2016.

Because of this alarming increase in dengue cases, the Department of Health (DOH) declared a national dengue alert last July 15. The areas mostly affected are the following: Western Visayas with 13,164 cases, followed by Calabarzon (11,474), Central Visayas (9,199), Region XII or Socsargen 2 (9,107) and Northern Mindanao (8,738). Likewise, several provinces in the Western Visayas region (i.e., Iloilo, Capiz, Aklan, Antique and Guimaras) have declared an outbreak due to the unprecedented number of cases.

Dengue clinical experts from nearby Asian countries provided the following reasons for the increasing deaths and CFR in the Philippines:
(1) Delay in presentation to the health care system resulting in delayed admission and hence delayed institution of appropriate rehydration;
(2) Delay in instituting appropriate rehydration measures in hospitalized patients; and
(3) Fluid overload

The Dengue Clinical Management Guideline was then updated, focusing on the approach to the disease based on the above findings.

For a disease wherein no specific antiviral agent is available, the key to a good clinical outcome is early recognition (by both sick individuals and physicians), with correct and appropriate interventions by understanding and being familiar with the problems that arise during the different phases of the disease.

Dengue is a mosquito-borne viral illness with a wide clinical spectrum that includes both severe and non-severe clinical manifestations. The illness begins abruptly with high grade fever accompanied by facial flushing, skin erythema, generalized body ache, myalgia, arthralgia, retro-orbital eye pain, photophobia, and headache. Mild hemorrhagic manifestations like petechiae and mucosal membrane bleeding (e.g. of the nose and gums) may be seen. At the onset, Dengue infection needs to be considered, and consultation must be sought. During febrile phase, appropriate diagnostic tests like CBC, and Dengue NS1 or NAAT-LAMP (if available) can be performed, and proper rehydration therapy can be instituted.

Patients suspected to have dengue infection must be advised on the warning signs, with any of the following: abdominal pain, vomiting, rapid breathing, mucosal bleeding, fatigue, restlessness, rising hematocrit and rapid decrease in platelet count; warranting hospital admission. Due to its dynamic nature, the severity of the disease usually occurs when the patient's fever disappears, coinciding with the critical phase in the next 48 hours. Physicians must distinguish signs of patient's stability, from compensated shock manifesting with tachycardia and narrowing pulse pressure, which precedes hypotensive shock. During this time, adequate hydration using crystalloids must be administered. Signs of bleeding should be monitored. Serial complete blood count can be done to assess hematocrit levels.

After the critical phase, a gradual reabsorption of extravascular compartment fluid takes place in the next 48–72 hours, signaling the start of the recovery phase. General well- being improves, appetite returns, and hemodynamic status stabilizes. Fluid administration must be regulated to avoid overload.

Based on the current situation of dengue in the Philippines, PCP and PSMID asserts the following recommendations:

1. Improve clinical management
    a. Seek early consult and prompt management.
    a. Standardize algorithms and training materials to capacitate ALL healthcare workers in the management of dengue from primary care to higher centers.

Engage professional groups (e.g., PSMID, PIDSP, PIDSOG) in educating healthcare providers on handling patients with dengue.

b. Increase laboratory support for quality and rapid diagnostic tests.

c. Apply only evidence-based approach to dengue, especially in outbreak setting. There is no anti-viral treatment for dengue. Supportive management and appropriate fluids during the febrile and critical phases of the illness should be provided. A high-level of suspicion for occult bleeding in severe cases should be maintained, and prophylactic platelet transfusions should be avoided.

d. Develop and invest on contingency plans for mass outbreaks, including collaboration of all hospitals, and augment frontliners.

2. Prevent and control dengue infection

a. Involve schools, hospitals, city and municipal health centers and other local healthcare units and social media on programs to help control dengue infection. These include the following: educational programs to increase awareness on dengue; sustainable vector control by eliminating breeding sites of mosquitoes, with proper waste disposal and regular cleaning, emptying and covering of water containers; protective measures like mosquito nets and insect repellants can be observed; and continuing surveillance of active cases.

b. Prioritize research on novel therapy, detection and prevention against dengue infection.

c. Consider offering dengue vaccine to individuals, specifically to those with previous dengue infection. Risks and benefits should be discussed prior to vaccination, as well as the risks of not being immunized.

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