Introduction

Until today, Dengue Hemorrhagic Fever, commonly shortened into DHF, is still a threat to our society’s health. During the turn or transition of the seasons, people must be more aware that they should keep their bodies and surroundings clean. Doing so will prevent the mosquitoes from breeding in large numbers.[1],[2]

Dengue Hemorrhagic Fever (DHF) is a disease caused by dengue virus (Arbovirus) that enters the human body through the bites of Aedes Aegypti mosquito.[3] These bites can cause serious disorders in the capillary blood vessels as bleeding and may lead to death.[4]

Dengue fever was first discovered in Southeast Asia in 1954, precisely in the Philippines, before it spread to other regions, such as Africa, America and the Eastern Mediterranean.[5] This disease is commonly found in tropical and sub-tropical regions such as India, Brazil, America, and Southeast Asia, including Indonesia.[6]

DHF in Indonesia was first reported in the year of 1968 in Surabaya, where, at that time, 58 people were found to be infected with DHF, and 24 people were declared dead due to DHF.[6]

Indonesian Ministry of Health (2016) recorded 3,219 DHF cases with 32 deaths in October 2015, 2,921 cases with 37 deaths in November 2015 and 1,104 cases with 31 deaths in December 2015. In October of the previous year (2014), they reported 8,149 DHF cases with 81 deaths, 7,877 cases with 66 deaths in November and 7,856 cases with 50 deaths in December.[7]

A large number of DHF cases in Indonesia is due to the lack of the public’s concern about their environments. Dirty and messy environments are prone to be a
mosquito breeding ground. Gutter areas, which are the most frequent place for mosquitoes to lay eggs, are rarely cleaned.[8]

**History**

Dengue fever was recorded to first start spreading rapidly during and after the World War II. This happened because the war changed the environment. The first dengue fever case was reported in the Philippines in 1953. Then around 1970, this fever became the primary cause of death, especially among children. Not long afterward, dengue fever began to spread to the Pacific and America.[9]

A report in the 17th century showed that dengue disease had become a dengue epidemic, i.e., an occurrence when a disease spreads rapidly in a short time. In 1779 and 1780, it was reported that the dengue fever epidemic has spread to Asia, Africa, and North America.[10]

**Reflection**

The public will have a better health status if they have much information about health problems. When people are educated, they will be able to absorb the information on preventive actions against DHF provided by health workers easily. Humans have a broad range of behaviors such as talking, reacting, and so on.

That way, humans also have emotions, perceptions and thinking activities. This behavior can be observed directly and indirectly.[11]

A person with a high level of education does not always have good behavior. It is possible that someone with above-average education behaves in such a way that is contrary to the knowledge that he/she has. Not all know people are willing to understand or even share their knowledge about the prevention and eradication of the disease, especially dengue fever, with others.[12]

The course of DHF infection is divided into three phases: febrile, critical, and recovery. The febrile phase involves high fever and is associated with generalized pain, reddish face and a headache; this usually lasts for two to seven days. In this phase, treatment is done to lower the body temperature by giving the patients antipyretic, paracetamol 10 mg/kg body weight/day every 4-6 hours if the fever is > 39oC. Then, in order to restore the energy and increase the nutrition, patients are encouraged to drink milk, juice that contains plenty of fiber and water. Afterward, examinations should be done daily.[13]

During the critical phase, the body temperature drops to 37.5oc - 38oc accompanied by a decrease in platelet count. If the patient still has a fever on day
3-5, they are advised to undergo hospitalization where health workers can monitor the vital signs and hemoglobin results, as well as do a physical examination and IV fluid administration with 20 ml/kg of crystalloid solution for 10 minutes. If the fever does not subside, resuscitation can be replaced with colloidal 10-20 ml/kg body weight for 10 minutes. However, if the body's condition improves, resuscitation can be done using crystalloids again. Afterward, a laboratory examination needs to be done to dengue fever patients with complications, including blood gas, liver function, and kidney function analysis.[13]

Lastly, in the recovery phase, the body is given fluids for 48-72 hours. After that, the fluid administration is stopped to avoid overload, and the patient is advised to have much rest.[13]

A clean and healthy lifestyle campaign is one of the public awareness programs to improve the ability of families and communities in maintaining their health. Washing hands with soap and clean, running water is one of the most critical steps we can take to avoid getting sick and spreading germs to others. This simple campaign is a governmental program socialized especially among school-aged children. [14]

In the clean and healthy lifestyle program there are 10 indicators that play an active role in realizing a healthy society, among them: eating diverse kinds of foods, taking blood-boosting tablets, consuming iodine-containing salt, and giving infants or toddlers Vit A. In addition, the program also encourages the public to dispose the garbage properly and participate in maintaining environmental health around the house, office or school. Individually, clean and healthy lifestyle is done to maintain personal health, including by bathing with clean water and soap, brushing teeth, trimming the nails, and so forth.[15]

Conclusions and recommendations

Dengue Hemorrhagic Fever (DHF) cases are still prevalent in today's everyday life. One primary factor is the low public awareness of their surroundings. Dirty corners or puddles are a common breeding ground for mosquitoes.

People with a high level of education do not always behave appropriately, health-wise. Many of them do not seem to care about the cleanliness of their environments.

As commonly known, prevention of dengue fever can be done with three simple steps: drain (clearing neighborhoods of ponds), seal (covering all water containers), and bury (filling in or draining stagnant water). In addition to that campaign, fogging is also needed. Public also must be aware of prevention such as a clean and healthy lifestyle, which includes not
accumulating garbage, not littering, implementing healthy and balanced diet, having adequate rest and regular exercise, and avoiding mosquito bites by applying lemongrass oil or anti-mosquito lotion.

Clean and healthy lifestyle is not only about washing hands with soap, but also about maintaining the environment and personal health. By implementing a clean and healthy lifestyle, the community's awareness to participate in cleaning up the surrounding environment is expected to increase and ultimately be able to reduce the mortality rate and DHF cases.

References