

## **Disease danger in floodwaters**

The recent flash flood has wreaked havoc on multiple areas. It is indeed very heart-warming seeing people from all walks of life contributing food item and money to support the affected family. Let us the civilian do our part to prevent the water-borne diseases that tend to spread post-flood. This could help to ease the health care system which currently is stretched to handle the COVID-19 cases.

Some common water-borne diseases, such as leptospirosis, typhoid fever, cholera and hepatitis A and E can spread easily via contaminated water. Study conducted by local universities during the severe December 2014 Kelantan floods observed a two-fold increase of leptospirosis incidence during the post-flood period. The leptospirosis cases in the state of Kelantan subsequently peaked in July 2015 with over 100 case reported per 100,000 population. The most common method of transmission is exposure to water contaminated with urine from carrier animals, particularly rats. Many people are not aware that leptospirosis not only can spread through ingestion of contaminated water, it can also spread through skin, eyes, ears or nasal exposure to contaminated water or damp soil. The risk is greater if the exposed body part has broken skin such as wound or abrasion.

Prevention of water-borne diseases should be instituted immediately to mitigate the potential spread of such diseases. First, ensure the hygiene level of drinking water and food. Make sure that the water is fully boiled and stored in a clean container. Second, avoid direct contact with flood waters by wearing boots and personal protective equipment (PPE). Cover wounds with waterproof dressings or apply an antiseptic ointment to minimise the possible infection.

On a macro-level, local council could play their part by educating the community to maintain rodent control measures and to recognize the common symptoms of leptospirosis. Once infected with the pathogen causing leptospirosis, the bacteria tend to take 7–10 days to incubate in our body. The disease tends to demonstrate two phases of acute illness. The first phase in fact could be mistaken as COVID-19 because the infected patients experience abrupt onset of a flu-like illness, with chills, muscle aches, severe headache or some might suffer from vomiting. Symptoms of the second phase of leptospirosis normally appear a few days after the first phase flu-like illness have disappeared. It must be noted that some patients demonstrate symptoms such as fast heartbeat, swelling of the feet, or ankles. A worsening disease could progress to kidney or liver failure, respiratory distress, and meningitis which might be fatal.

As mentioned earlier, we can cut down the risk of leptospirosis infection if direct contact with contaminated water or soil containing animal urine is avoided. For people working at high risk areas close to drainage, water-treatment plant or reported leptospirosis cases, they should receive short-term prophylaxis with prescribed antibiotics. Apart from that, the affected households can disinfect and their home using disinfectant that can be prepared from concentrated benzalkonium chloride or chlorine dioxide. Do refer to the list of surface disinfectants approved by National Pharmaceutical Regulatory Agency (NPRA) which the updated list is available on the NPRA official webpage.

With COVID-19 and its new variant looming over our heads, governmental, non-governmental organisations and local residents need to close ranks to prevent further infectious disease outbreaks!

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