



中華人民共和國香港特別行政區政府總部食物及衛生局
Food and Health Bureau, Government Secretariat
The Government of the Hong Kong Special Administrative Region
The People's Republic of China

[English Translation]

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13 July 2018

Dear Miss SO,

Panel on Food Safety and Environmental Hygiene and
Panel on Health Matters
Diseases Transmitted via Rodent and
Rodent Infestation Problems in Yuen Long

Thank you for your letter to the Food and Health Bureau dated 31 March 2017 regarding the captioned. Our response is as follow:

In general, rodents can transmit a number of diseases to humans directly (including Hantavirus infection, Leptospirosis, etc.). The diseases can be transmitted through handling of rodents; direct contact with the faeces, saliva or urine (hereunder referred to as “excreta”) of infected rodents; by inhalation of the virus in rodent aerosolised excreta; being bitten by infected rodents; eating food contaminated with infected rodent’s excreta; or touching the eyes, nose and mouth after contacting articles contaminated with infected rodents’ excreta.

In addition, some diseases (such as Typhus and Other Rickettsial Diseases, Plague, etc.) can be transmitted to humans indirectly, e.g. through the bites of mites, flea and tick infected by rodents.

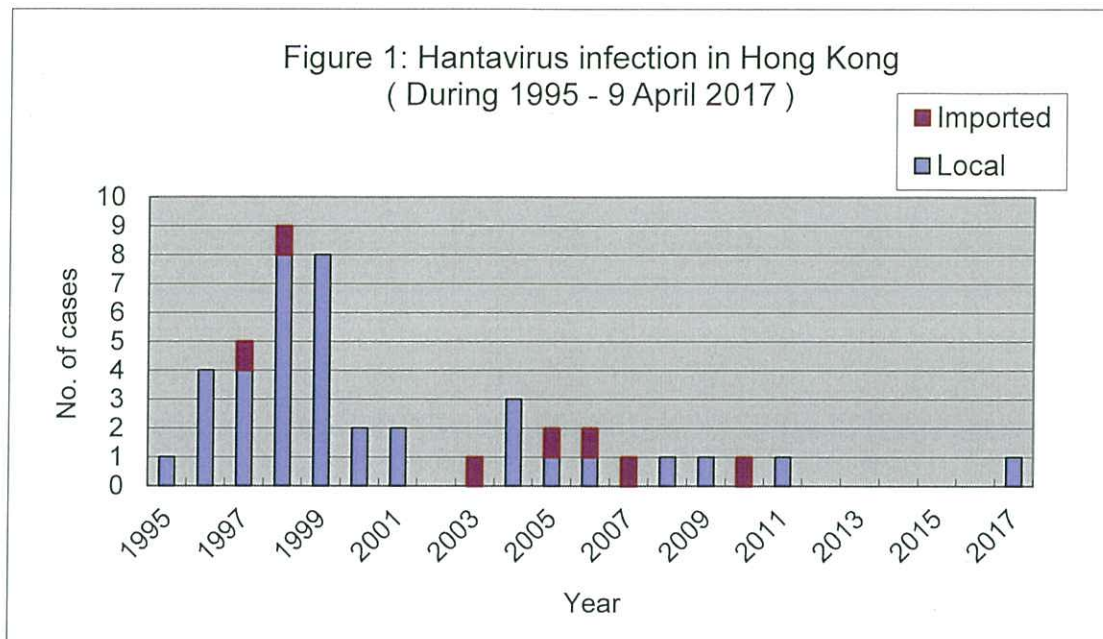
Hantavirus infection

There are two main types of Hantavirus infection, namely the Haemorrhagic Fever with Renal Syndrome and the Hantavirus Pulmonary Syndrome. Hantavirus is mainly transmitted through direct contact with infected rodents (see paragraph 1 above). Human to human transmission is extremely rare. The incubation period of Hantavirus infection is around one week to eight weeks. Early symptoms include fever, fatigue and muscle aches, especially at shoulder, back and thigh. Headaches, dizziness, chills and gastrointestinal symptoms such as nausea, vomiting, diarrhoea and abdominal pain may also be diagnosed. There may be renal impairment and respiratory distress for severe cases. There is no specific treatment for Hantavirus infection. Hence, it is important for patients to seek early medical consultation.

Hantavirus infection in Hong Kong

Hantavirus infection has been included in the list of notifiable diseases since 14 July 2008 under the Prevention and Control of Disease Ordinance (Cap. 599). All registered medical practitioners are required to notify the Centre for Health Protection (CHP) of the Department of Health (DH) for any suspected or confirmed cases of notifiable infectious diseases.

The CHP has received a total of 45 cases of Hantavirus infection during the period from 1995 to 9 April 2017 (see Figure 1 below). The annual number of reported cases ranged from zero to nine cases. Majority of the cases (84%) are locally acquired whereas there are seven imported cases (16%), including six cases acquired from the Mainland and one case from Macao.



A case of Hantavirus infection in 2017

On 22 March 2017, the CHP recorded a case of Hantavirus infection concerning a 22-year-old man with good past health. Investigation commenced immediately upon notification. The patient had symptoms of fever, vomiting, abdominal pain and runny nose since 5 March 2017. He attended the Accident and Emergency Department of Pok Oi Hospital on 11 March 2017 and was transferred to Tuen Mun Hospital for admission on the same day. He subsequently developed acute renal failure, impaired liver function and reduction in platelet count. His collected blood specimen was tested positive for Hantavirus. The patient was treated with antibiotics and his clinical condition was stable all along. He was discharged on 28 March 2017.

Epidemiological investigation by the CHP revealed that the patient lived with his family members in Yuen Long. Home contacts of the patient remained asymptomatic. The patient did not keep pets at home. He did not report any rodent bites and any contacts with their faeces or urine. He had no travel history during the incubation period. The case and the relevant investigation findings were referred to the Food and Environmental Hygiene Department (FEHD) for their rodent surveillance, investigation and risk assessment.

Prevention and control measures

Means to prevent Hantavirus infection include:

- (i) **Eliminate sources of food and nesting places for rodents in living environment:** Members of the public should store food properly and handle pet food carefully so that it will not become food for rodents. Store all refuse and food residues in dustbins with well-fitted covers. Dustbins must be emptied daily. Keep premises clean, especially refuse rooms and stairways. Prevent accumulation of articles. Inspect regularly all flowerbeds and pavements for prevention of rodent infestation.

- (ii) **Avoid high risk activities to reduce rodent contact:** Members of the public should avoid handling dead or trapped rodents with bare hands; entering rodent infested structures; touching rodent excreta or nests; keeping captive wild rodents as pets, handling objects that has stored around rodents' habitat; plowing or planting with bare hands; lying or camping on the ground in the wild; and living in places with frequent rodent activities.

To prevent and control Hantavirus infection in Hong Kong, the Government has adopted a multifaceted approach, with a series of measures targeting at environmental hygiene, personal protection, disease surveillance, source tracing, rodent monitoring, infection control and health education. They include:

Disease surveillance

As Hantavirus infection is a notifiable disease in Hong Kong, all registered medical practitioners are required to report suspected or confirmed cases of Hantavirus infection to the CHP. To facilitate clinical diagnosis, the Public Health Laboratory Service Branch of the CHP offers free laboratory testing services for Hantavirus.

Epidemiological investigation

Upon notification of Hantavirus infection, the CHP will start epidemiological investigation immediately. The CHP will contact the attending physician to obtain clinical information and will arrange further testing for the case if necessary. The objective is to identify the possible sources of infection and at-risk groups (such as home contacts and travel collaterals) will be put under medical surveillance. The investigation findings, including place of residence of the cases and places patients have visited, will

be referred to the FEHD for rodent surveillance, investigation and risk assessment to minimize the spread of the disease locally.

Health education

The CHP has been making use of various channels to disseminate health information, including personal hygiene and environmental hygiene as well as prevention measures of various infectious diseases to the public. The CHP will update the health education materials from time to time to provide the public with the latest health information. Members of the public can obtain the latest health information on the prevention of Hantavirus infection at the website of the CHP of the DH. The information is already available at the “IMPORTANT” section for public access.

Port health measures

The Port Health Office of the CHP of the DH inspects and monitors the hygiene conditions at the harbour, the Hong Kong International Airport and various boundary control points. It also co-ordinates the work of the relevant departments in the prevention and control of rodents.

Infection control

Human to human transmission of Hantavirus is extremely rare. Travelers who travel to Hantavirus-endemic regions should avoid areas with poor sanitation and should not touch rodents and their excreta. Travelers should also take measures to reduce entry of rodents into the accommodation and prevent food contamination by rodents.

Rodent surveillance

FEHD has been adopting a comprehensive approach in its surveillance as well as rodent prevention and control work. Since 2000, FEHD has been making use of the rodent infestation rate (“RIR”) to gauge the general situation of rodent infestation in individual districts and as the basis for devising anti-rodent measures and assessing the overall efficacy of rodent prevention and disinfestation work. FEHD has, when devising the RIR, made reference to practices adopted by various cities around the world and the actual situation of Hong Kong. The overall RIR for 2016 was 4.0% which was slightly higher than the RIR of 3.0% for 2015. However, the annual overall RIRs recorded since 2010 were kept below 5%, indicating that the rodent problem in public areas of Hong Kong has been largely under control.

FEHD has been adopting a variety of rodent control measures. Targeting districts with relatively high complaint figures and observation from patrolling, FEHD will carry out measures including poisoning and trapping of rodents and destroying rat holes in related rear lanes, strengthening street cleansing to reduce food sources and hiding places for rodents, strengthening publicity and education programmes to encourage active participation of the public in anti-rodent work. Apart from routine work, FEHD has been taking the lead in organising territory-wide interdepartmental anti-rodent campaigns on an annual basis to strengthen rodent prevention and control and remind the public of the importance of such. During the campaigns, FEHD steps up anti-rodent work and education work in target areas, mainly including markets / municipal services buildings, hawker bazaars, typhoon shelters and rear lanes adjacent to food premises, and other rodent-infested locations and their vicinity. FEHD also organizes talks and disseminates messages through the Facebook page “Ah Tak” to promote anti-rodent knowledge and awareness, with a view to fortifying public education in this respect.

Within 24 hours after receiving the notification of Hantavirus infection case in Yuen Long from the CHP of the DH, FEHD conducted vector investigation and rodent control work in the vicinity of the patient’s residence in Yuen Long Tai Tong Road and places where the patient visited. Rodents were found near the patient’s residence, Yuen Long Town and the patient’s school in Kowloon Tong. In view of the Hantavirus infection case, FEHD stepped up rodent control work. During the period of 24 to 31 March 2017, FEHD had set-up 180 baiting points, 25 trapping locations and collected a total of 7 dead rodents as well as 12 live rodents. In order to reduce hiding places for rodents, FEHD arranged repair of road cracks near the patient’s residence and liaised with other departments on follow-up work. On publicity and education fronts, FEHD also mounted a series of activities. On 3 April 2017 and 6 April 2017, FEHD conducted visits to the vicinity of the patient’s residence together with 10 and 11 Yuen Long District Council (DC) members respectively. In addition to educating the residents, views of DC members and residents representatives were collected for identification of suitable baiting and trapping sites.

Special measures currently taken by the Government

Meanwhile, the CHP will continue strengthening the work of health promotion in order to raise the public awareness of prevention of rodent transmitted diseases. Given the high adaptability and reproductive rate of

rodents, the number of rodents can surge in a short time under suitable living conditions. Active participation on the part of the community is indispensable if anti-rodent work is to achieve optimal results. FEHD will continue to undertake more intense rodent prevention and control measures and actions jointly with relevant stakeholder(s). In addition, FEHD would also continue to promote and co-ordinate pest control work including enhancing contact with other Government departments and local parties for more effective rodent control.

[signed]

(Diane WONG)

for Secretary for Food and Health