

CHP investigates cases of human infection of rat Hepatitis E virus

The Centre for Health Protection (CHP) of the Department of Health is today (May 14) investigating three cases of human infection of rat Hepatitis E virus (HEV) and urged members of the public to be vigilant against hepatitis E infection and to strictly observe good personal, food and environmental hygiene.

The first two cases involves an 81-year-old and a 67-year-old man with underlying illnesses respectively. Both had presented with liver function derangement. They have been in a stable condition all along and no hospitalisation is required.

The third case involves a 74-year-old man with underlying illnesses, who had presented with liver function derangement. He was admitted to Tuen Mun Hospital for management due to underlying illnesses on April 28 and had passed away on May 4.

The blood samples of the three patients were tested positive for rat HEV upon laboratory testing.

The CHP's epidemiological investigations revealed that the three patients resided in Kowloon City, Southern District and Tuen Mun respectively. They could neither recall having direct contact with rodents or their excreta, nor had noticed rodents in their residence. The 67-year-old patient had travelled to Taiwan and Korea during the incubation period (IP) while the other two patients had no travel history during the IP.

"Based on the available epidemiological information, the source and the route of infection could not be determined. The CHP's investigation is on-going," a spokesman for the CHP said.

"The CHP has already informed the Pest Control Advisory Section of the Food and Environmental Hygiene Department about the cases to carry out rodent control measures and survey as appropriate," the spokesman added.

The exact mode of transmission of rat HEV to humans is unknown at the moment. The usual HEV causing human infection is transmitted mainly through the faecal-oral route, for example, due to faecal contamination of drinking water. Besides, foodborne transmission can result from ingestion of undercooked meat or meat products produced from infected animals (HEV has been detected in pig livers). Other rare transmission routes identified include transfusion of infected blood products, organ transplant and vertical transmission from a pregnant woman to her foetus.

To prevent hepatitis E infection, members of the public should maintain good personal and food hygiene. They should adopt the 5 Keys to Food Safety

in handling food, i.e. Choose (Choose safe raw materials); Clean (Keep hands and utensils clean); Separate (Separate raw and cooked food); Cook (Cook thoroughly); and Safe Temperature (Keep food at safe temperature) to prevent foodborne diseases.

- Drink only boiled water from the mains or bottled drinks from reliable sources.
- Avoid drinks with ice of unknown origin.
- Purchase fresh food from hygienic and reliable sources. Do not patronise illegal hawkers.
- Clean and wash food thoroughly. Cook food, especially seafood (e.g. shellfish), pork and pig offal, thoroughly before consumption. Avoid raw food or undercooked food.
- Slice raw meat and offal into thin strips to allow thorough cooking, especially during hotpot or congee cooking.
- For sliced pig liver, depending on thickness and quantity, boil at 100°C or stir-fry in hot skillet/wok for at least three to five minutes.
- Heating to an internal temperature of 90°C for 90 seconds is required for cooking of molluscan shellfish. If possible, remove the shells before cooking as they impede heat penetration. Otherwise, boil at 100°C until their shells open; boil for additional three to five minutes afterwards. Discard any shellfish that do not open during cooking.
- For meat and offal, make sure that juices are clear, not red, blood is not visible when you cut the cooked meat and offal.
- When having hotpot, use separate chopsticks and utensils for handling raw and cooked foods to prevent cross-contamination.

Generally speaking, rodents (such as rats) can transmit multiple diseases to humans directly and indirectly. The public are advised to adopt the following measures:

- Eliminate sources of food and nesting places for rodents in living environment. Store food in covered containers and handle pet food properly to avoid it becoming food for rodents;
- Store all refuse and food remnants in dustbins with well-fitted cover. Dustbins must be emptied at least once a day;
- Keep premises, especially refuse rooms and stairways clean. Avoid accumulation of articles;
- Inspect all flowerbeds and pavements for rodent infestation regularly; and
- Avoid high risk activities below to reduce rodent contact:
 - Avoid rodent contact and places dirtied with rodent excreta;
 - Avoid handling rodents with bare hands;
 - Wash hands with liquid soap and water immediately after handling animals, and disinfect contaminated areas; and
 - If wound appears, clean broken skin immediately and cover it properly with waterproof adhesive dressings.

