

not good news H5N1 AI virus and cats

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Cats can spread deadly bird flu

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Cats can catch – and spread – the bird flu that has ravaged poultry and killed at least 26 people across East Asia in 2004. This is the first time cats have been known to get sick from flu, and means the H5N1 virus has already acquired the ability to spread in some mammals.

The fear now is that cats, and perhaps other animals, could act as a vessel for the virus to further evolve into a human pandemic.

Thijs Kuiken and colleagues at the Erasmus Medical Centre in Rotterdam, the Netherlands did the study after three cats and a zoo leopard living near sick poultry in Thailand were confirmed in February 2004 to have died of H5N1.

A tiger in the same zoo got sick with H5N1 but recovered. “Cats have never been observed to get sick from flu infection before,” Kuiken told New Scientist.

Lung damage

The team infected three laboratory cats with H5N1 taken from a human case in Vietnam. All got very sick with flu symptoms, and post mortems showed they had the same lung damage as people.

Cats given a human flu virus, H3N2, stayed healthy. Other cats studied caught H5N1 by eating infected birds, while two healthy cats housed with the sick animals caught the disease, showing it spreads among cats.

The results mean pet cats might give people H5N1 after eating one of the many wild birds or poultry still infected across East Asia. But more worrying than cats spreading the existing virus, says Kuiken, is how cats might change its evolution.

H5N1 was already known to infect mammals – 34 people, of whom 23 died, were confirmed to have the virus before the Asian poultry outbreak was largely controlled in March.

Three more deaths have since been confirmed in Vietnam, where H5N1 has again broken out in poultry. But so far the virus seems unable to spread from person to person.

Lethal pandemic

If H5N1 acquires this ability, it could cause a lethal pandemic. The World

Health Organization fears the virus might do this by hybridising with a human flu in a person infected with both.

Pigs also pose a theoretical risk as they catch both bird and human flu. In August, Chen Hualan of Harbin University in China told a flu conference in Beijing that H5N1 had been found in Chinese pigs in 2002 and 2003, which China had not previously reported.

What has received less attention, says Kuiken, is the possibility that H5N1 could quietly evolve the ability to spread among humans by itself, by infecting species that select for viruses better adapted to mammals.

Some researchers think this route – rather than bird flu combining with a human flu – is how the lethal 1918 flu pandemic evolved. Chen also reported in Beijing that her team had successfully infected mice with H5N1 in the lab.

“The more mammals the virus can infect, the greater the risk that it will change to one that can transmit easily among mammals,” says Kuiken. The team is now checking whether cats can catch another bird flu, H7N7, which broke out in the Netherlands in 2003, and can infect humans.

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