Detecting Avian Influenza Virus (H5N1) in Domestic Duck Feathers

To the Editor: Free-range domestic ducks can be a key factor in regional spreading of Asian subtype H5N1 avian influenza (AI) virus (1–3). Even asymptomatic domestic ducks can shed the virus continuously from the oral cavity and cloaca (3–5). Therefore, early detection of infected ducks that are shedding the virus would reduce the risk of spreading AI virus (H5N1) in a region where the virus has been endemic in domestic ducks. We previously reported that AI virus has been endemic in domestic ducks (a–c) were inoculated intranasally with 10^7 50% egg infective doses (EID_{50}) of 0.1 mL. All ex-

Virus titer (RT-PCR result)†

| dpi | F | O | C |
|-----|---|---|---|
| 2   | 4.2 (+) | 2.0 (+) | – (–) |
| 3   | 6.9 (+) | 2.7 (+) | – (–) |
| 4   | 6.8 (+) | 3.7 (+) | 1.7 (–) |
| 5   | 6.5 (+) | – (–) | – (–) |
| 6   | 5.6 (+) | – (–) | – (–) |
| 7   | 3.8 (+) | – (–) | – (–) |
| 8   | 5.8 (+) | – (–) | – (–) |
| 9   | – (–) | – (–) | – (–) |
| 10  | – (–) | – (–) | – (–) |

*RT-PCR, reverse transcription–PCR; dpi, days postinoculation; F, feathers; O, oropharyngeal swabs; C, cloacal swabs.
†Virus titer expressed as 50% egg infectious doses per mL; –, negative for virus isolation. RT-PCR result: +, positive; –, negative.
Yu Yamamoto,
Kikuyasu Nakamura,
Masatoshi Okamatsu,
Ayako Miyazaki,
Manabu Yamada,
and Masaji Mase

Author affiliation: National Institute of Animal Health, Tsukuba, Japan
DOI: 10.3201/1410.080415

Acknowledgments

We are grateful to Masaru Kobayashi and Megumi Shimada for their technical assistance.

This study was supported by a Grants-in-Aid for Scientific Research from the Zoonoses Control Project of the Ministry of Agriculture, Forestry and Fisheries of Japan.

References

1. Gilbert M, Chaitaweesub P, Parakama-wongsa T, Premashithira S, Tiensin K, Kalpravich W, et al. Free-grazing ducks and highly pathogenic avian influenza, Thailand. Emerg Infect Dis. 2006;12:227–34.
2. Martin V, Sims L, Lubroth J, Pfeiffer D, Slingenbergh J, Dometich J. Epidemiology and ecology of highly pathogenic avian influenza with particular emphasis on South East Asia. Dev Biol (Basel). 2006;124:23–36.
3. Songserm T, Jam-on R, Sae-Heng N, Mee-mak N, Hulse-Post DJ, Sturm-Ramirez KM, et al. Domestic ducks and H5N1 influenza epidemic, Thailand. Emerg Infect Dis. 2006;12:575–81.
4. Hulse-Post DJ, Sturm-Ramirez KM, Humber J, Seiler P, Govorkova EA, Krauss S, et al. Role of domestic ducks in the propagation and biological evolution of highly pathogenic H5N1 influenza virus in Asia. Proc Natl Acad Sci U S A. 2005;102:10682–7. DOI: 10.1073/pnas.0504662102.
5. Sturm-Ramirez KM, Hulse-Post DJ, Govorkova EA, Humber J, Seiler P, Puthavathana P, et al. Are ducks contributing to the endemicity of highly pathogenic H5N1 influenza virus in Asia? J Virol. 2005;79:11269–79. DOI: 10.1128/JVI.79.17.11269-11279.2005
6. Yamamoto Y, Nakamura K, Okamatsu M, Yamada M, Mase M. Avian influenza virus (H5N1) replication in feathers of domestic waterfowl. Emerg Infect Dis. 2008;14:149–51.
7. World Health Organization. Recommendations and laboratory procedures for detection of avian influenza A(H5N1) virus in specimens from suspected human cases. 2007 [cited 2008 Mar 24]. Available from http://www.who.int/csr/disease/avian_influenza/guidelines/labtests/en/index.html
8. Patterns of infection. In: Flint SJ, Enquist LW, Racaniello VR, Skalka AM, editors. Principles of virology: molecular biology, pathogenesis, and control of animal viruses. 2nd ed. Washington: American Society for Microbiology; 2004. p. 596–621.
9. Chua TH, Ellis TM, Wong CW, Guan Y, Ge SX, Peng G, et al. Performance evaluation of five detection tests for avian influenza antigen with various avian samples. Avian Dis. 2007;51:96–105. DOI: 10.3382/0005-2086-0096:PEODFT2.0.CO;2
10. Woolcock PR, Cardona CJ. Commercial immunoassay kits for the detection of influenza virus type A: evaluation of their use with poultry. Avian Dis. 2005;49:477–81. DOI: 10.1637/0005-2086-49.3.477

Address for correspondence: Yu Yamamoto, National Institute of Animal Health, 3-1-5 Kannonndai, Tsukuba, Ibaraki, 305-0856 Japan; email: yyu@affrc.go.jp

Neisseria gonorrhoeae Meningitis in Pregnant Adolescent

To the Editor: Dissemination is a rare complication of gonococcal infection and has been observed in 0.5%–3% of patients (1). We describe a new case in a pregnant adolescent infected with a strain resistant to ciprofloxacin and tetracycline.

A 14-year-old girl of Ecuadorian descent, 24 weeks pregnant, sought treatment after a 48-hour history of holocranial cephalea, fever, nausea, and vomiting. She had returned a few days before from a holiday trip to Quito, Ecuador, and had not taken any antimicrobial drugs. She was admitted to hospital with a temperature of 40°C and neck stiffness. Results of a neurologic examination were otherwise normal.

Laboratory blood tests at hospital admission showed a leukocyte count of 13,400 cells/mm³ (with a mature neutrophil count of 87%), hemoglobin of 10.8 g/dL, and a platelet count of 611,000 cells/mm³; electrolyte levels and results of liver function tests were normal, but a total cholesterol count...