Avian Influenza

Traveler Summary

Key Points

- Avian influenza is a viral infection acquired through inhalation of or direct contact with feces, saliva, or nasal or eye secretions from sick or infected poultry, mostly in China and Southeast Asia.
- Risk to travelers is minimal and is mainly present where direct contact with poultry and their secretions occurs (such as live animal markets and poultry farms) during the winter months.
- Symptoms include fever, cough, muscle aches, runny nose, sneezing, headaches, and chills.
- Consequences of infection include pneumonia and respiratory failure.
- Prevention includes avoiding risk areas, avoiding contact with and consumption of undercooked poultry in affected areas, and observing respiratory hygiene (cough and sneeze etiquette) and hand hygiene (frequent, thorough handwashing).
- No vaccine or preventive drugs are available. Current influenza vaccines are not protective.
- Antivirals, such as oseltamivir (Tamiflu) or zanamivir (Relenza), may be used for treatment, under medical advice.

Introduction

Avian influenza (sometimes called "bird flu") is caused by infection with avian strains of influenza viruses, which occur naturally in wild aquatic birds and can infect domestic poultry, other birds, and animals. Infected birds shed the virus in feces, saliva, and nasal or eye secretions. Avian influenza viruses rarely infect humans, but when they do, they often cause severe disease. Two major subtypes of avian influenza are of potential concern to humans: influenza A(H7N9) and influenza A(H5N1); however, other subtypes (such as influenza A[H5N6]) also cause severe illness and death in humans.

Risk Areas

H7N9: This subtype is prevalent in poultry in China. Since 2013, over 1500 human cases of H7N9 have occurred, mostly during winter months. Human cases have recently decreased, with only 3 cases during the 2017-18 winter. Cases in travelers are rare.

H5N1: This subtype is common in poultry in Bangladesh, China, Egypt, India, Indonesia, and Vietnam, with occasional outbreaks elsewhere. Since 2003, isolated ongoing transmission from birds to humans has occurred, resulting in more than 860 human cases (but few in recent years). Cases in travelers are rare.

Transmission

Avian influenza is mainly transmitted through inhalation of or direct contact with feces, saliva, or nasal or eye secretions from sick (H5N1) or infected (H7N9) poultry. No evidence of sustained human-to-human transmission exists; however, small household clusters have occurred.

Transmission can also occur through contact with the virus on surfaces or by inhaling the virus. Respiratory secretions, bodily fluids, and feces of persons infected with the virus should be considered potentially infectious. Exposure might also occur by eating undercooked eggs or poultry.

On aircraft, a risk (although very low) of infection exists for travelers sitting within a 2-seat range (in back, front, and beside) of an infectious traveler.

Risk Factors

Risk to travelers is minimal and is mainly present where direct contact with poultry and their secretions occurs (such as live animal markets and poultry farms) during the winter months. Risk may exist from consumption of poultry in affected areas because it is difficult to determine visually whether the meat is fully cooked.

Symptoms

Symptoms are similar to those of severe seasonal influenza, with fever and typical symptoms such as cough, muscle aches, runny nose, headaches, and chills.

Consequences of Infection

Avian influenza can lead to pneumonia and severe lower respiratory illness about 3 to 5 days into the illness. Death occurs in about 60% of H5N1 cases and 40% of H7N9 cases. Persons 75 years and older are at greatest risk.

Need for Medical Assistance

Travelers who develop symptoms of avian influenza within 10 days of travel to an affected area should observe respiratory hygiene (cough and sneeze etiquette) and seek immediate medical care, informing the medical provider of travel history.

Shoreland recommends the use of oseltamivir (Tamiflu) for the treatment of avian influenza over zanamivir (Relenza), which is inhaled and more difficult to use. Travelers who carry oseltamivir or zanamivir should take the drug only under medical advice. This could be at the destination or after consultation with the prescribing provider at home.

Prevention

Nonvaccine

Travelers should be advised to:

- Avoid places where direct contact with birds and poultry may occur, such as live animal markets and poultry farms in affected areas.
- Avoid consumption of poultry in affected areas because it is difficult to determine visually whether the meat is fully cooked.
- Observe respiratory hygiene (cough and sneeze etiquette) and hand hygiene (frequent, thorough handwashing).

Vaccines

Several human monovalent H5N1 vaccines have been licensed but are not commercially available. No FDA-approved vaccine for H7N9 exists for human use. Seasonal influenza vaccines do not include avian strains and offer no partial or cross-protection.

Special Considerations

Entry Screening

Travelers departing China should be aware that many countries have implemented enhanced health surveillance of incoming travelers, including thermal scanning at border points and random temperature checks, due to cases of H7N9. Several countries have indicated the possibility of mandatory hospital referral or confinement for suspected cases in ill arrivals.

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