Avian Influenza

Weapon
No

Alternate Names
Bird flu

Etiology
Influenza virus A subtype H5N1

Intracelluar viral replication in upper and lower respiratory tract within 24 hours after infection; present in secretions for 3-5 days; edema and hyperemia of upper and lower respiratory cells, esp bronchial epithelial cells, with loss of cilia; extends to alveolar cells in pneumonia

Transmission
Source:	Birds – wild and domestic
Entry:	Inhalation
Human-to-Human:	Rare [5] ▲

Predisposing/Comorbid Conditions
NA

Demographics [5]
Location:	Influenza A H5N1 infections in Republic of Korea, Vietnam, Japan, Tapei China, Thailand, Cambodia, Hong Kong, Laos, Indonesia, People's Republic of China; other types reported in past in Virginia (H5N2 Shenandoah Valley, 2002; H7N7 Netherlands, 2003; H7N3, Canada, 2004)
Populations:	All, esp persons exposed to poultry [4]
Calendar:	Year-round

Systems

Gastrointestinal
Musculoskeletal
Optic
Oropharynx
Respiratory – lower
Respiratory – upper

Incubation

Up to 10 days

Signs/Symptoms [2]

Abdomen – pain
Appetite – reduced (anorexia)
Bowel movements – diarrhea
Chest, ant – pain, pleuritic
Chills
Cough – nonproductive
Cough – productive
Dizziness (lightheaded)
Eyes, conjunctivae – injected
Eyes, motion – painful
Eyes, tears (lacrimation) – excess
Eyes, vision – light sensitivity, increased (photophobia)
Face, parotid glands – enlarged
Fatigue
Head – pain (headache)
Joints – pain (arthralgia)
Lymph nodes, ant cervical – enlarged
Mentation – weakness (malaise)
Muscles – pain (myalgia)
Muscles – stiffness
Muscles – tender
Nausea
Nose, mucosa – inflamed
Nose – congested
Nose – drainage (rhinorrhea, coryza)
Temperature, body – elevated (fever)
Throat – dry
Throat – injected

Throat – sore
Voice – hoarse
Vomiting

Differentiation

Includes, but not limited to:

Numerous other viral and bacterial infectious diseases with malaise, headache, fever, myalgia, sore throat, early in course.

Complications [2]

Include, but not limited to:

Encephalopathy/encephalitis
Guillain-Barré syndrome
Myelitis
Myocarditis
Myositis
Pericarditis
Pneumonia – bacterial
Pneumonia – viral
Reye's syndrome
Rhabdomyolysis
Toxic shock syndrome

Laboratory [1] ▲

Blood lymphocytes – decreased (lymphopenia)

ECG

NA in absence of myocarditis, pericarditis, or other complications [2]

Imaging

NA in absence of pulmonary or other complications [2]

Other Tests

NA in absence of complications [2]

Treatment – Nonpharmacologic

Fluids and electrolytes

Treatment – Pharmacologic

Antivirals [3]
Symptomatic [6] ▲

Treatment – Surgical/Invasive

NA in absence of complications

Precautions

See [1] ▲

Primary Prevention

Avoidance/control of infected animals and secretions

Course

Variable
More severe in elderly and persons with preexisting conditions
Often fatal ☠ [5]

Notes

[1] CDC: "Highly pathogenic avian influenza A (H5N1) is classified as a select agent and must be worked with under BSL 3+ laboratory conditions. This includes controlled access double door entry with change room and shower, use of respirators, decontamination of all wastes, and showering out of all personnel. Laboratories working on these viruses must be certified by the US Department of Agriculture. The same BSL 3+ laboratory guidelines are recommended for conducting virus isolation for SARS-CoV. CDC does not recommend that virus isolation studies on respiratory specimens from patients who meet the above criteria be conducted unless stringent BSL 3+ conditions can be met. Therefore, respiratory virus cultures should not be performed in most clinical laboratories and such cultures should not be ordered for patients suspected of having H5N1 infection." ▲

[2] Mainly based on data derived from common influenza, but case reports to date indicate that respiratory involvement may be more prominent in Avian influenza

[3] Uncertain, variable efficacy; consult current guidelines

[4] Contact with wild birds, ducks, chickens, turkeys, or (unproven) infected humans

[5] To publication date ▲

[6] Avoid aspirin and aspirin-containing products for febrile infections in children <19 yrs due to association with Reye's syndrome

http://www.argus1.com/?avian

Updates