Zuku Review FlashNotes™

Avian Influenza (AI)
Condensed Version

**Presentation:** Two Scenarios in POULTRY flocks:

1) **Low Pathogenic Avian Influenza (LPAI) virus**
   - **MAJORITY** of AI infections
   - **Upper respiratory infection**
     - Sneezing, coughing, conjunctivitis
     - Ocular & nasal discharge
   - Decreased egg production
   - Minor health threat to people

2) **Highly Pathogenic Avian Influenza (HPAI) virus:** **FOWL PLAGUE**
   - **MINORITY** of AI infections
   - **REPORTABLE:** ZOONOTIC POTENTIAL
   - Peracute death, high morbidity, high mortality
   - **RAPID** spread; Severe depression, anorexia
   - Drastically ↓ egg prod.; Greenish, watery diarrhea
   - **Severe upper respiratory** signs- Sinusitis, conjunctivitis, dyspnea
     - Cyanotic edematous combs, wattles, shanks
   - Neurologic- droopy wings, incoordination, paralysis, opisthotonus, torticollis
   - H5 & H7 HPAI subtypes are MOST COMMONLY IMPLICATED notifiables

**Tests of choice:**
- Field diagnosis – If suspect AI based on clinical signs, QUARANTINE
- NECROPSY: Trachea, lung, spleen, tonsils, brain - edema, congestion, multi-focal hemorrhage
- AGID or ELISA - detects AI antigens, IF positive,
  - Do virus isolation
  - Subtyping: Hemagglutinin (HA) & Neuraminidase (NA) inhibition tests or rRT-PCR

**Rx of choice:**
- LPAI, Non-notifiable AI - Supportive care, broad spectrum antibiotics
- HPAI, NAI - CULL infected flock

**Prevention:**
- Vaccination (Autogenous): Requires approval State veterinarian
- Strict biosecurity and sanitation protocols

**Pearls:** Natural reservoir = Clinically normal shorebirds & migrating waterfowl

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**Classic Questions**

Which two subtypes are considered Notifiable avian influenza (NAI)?

What are the primary signs of Low Pathogen Avian Influenza (LPAI)?
What are the primary signs of High Pathogen Avian Influenza (HPAI)?

What is the natural reservoir for avian influenza in the wild?