Infectious Bronchitis Virus (IBV)

**Presentation:** Highly contagious acute upper RESPIRATORY disease
- ONLY chickens, young most susceptible
- THINK gasping young birds, sharp ↓ egg prod. in layers, ‘wrinkled’ eggs
- 100% morbidity, low mortality
- Asymptomatic to Respiratory, Renal, Reproductive signs (“3 Rs”)
  - Depression, ruffled feathers, huddling heat seekers, inappetence
  - Gasping, coughing, sneezing, nasal discharge, tracheal rales
  - Conjunctivitis, peri orbital swelling, +/− air sacculitis
  - Diarrhea, urolithiasis, ↓ egg laying, ‘wrinkled’ eggs, watery albumen

**Test(s) of choice:** REPORTABLE IN SOME STATES
- Field diagnosis – clinical signs
- Necropsy
  - Trachea, nasal passages, sinuses – edema w/ serous, mucus, yellow caseous exudates, caseous plug in trachea, bronchi
  - Kidneys – pale, swollen, white urates in distended tubules, ureters
  - Oviduct – occluded, hypoglandular, cystic
  - Coelemic cavity – egg yolk peritonitis
- Virus Isolation - Negative hemagglutination reaction with chicken RBCs
- Antibody, antigen detection – Serology: Paired titers
- RT-PCR of viral RNA distinguish serotypes

**Rx of choice:** Supportive care, antibiotics (secondary bacterial infections)

**Prevention:** Vaccination, strict biosecurity and sanitation protocols

**Pearls:**
- Coronavirus – RNA virus
- Transmission by direct contact, fomites
- Differentiate from Newcastle & Avian Influenza – IBV DOES NOT hemagglutinate chicken RBCs
- Clinically recovered / asymptomatic birds (carriers) are most important vector

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**Classic Question(s)**

What are 4 reasons that infectious bronchitis (IBV) is very hard to prevent/control?

What is the most important vector for infectious bronchitis in a flock?

What kind of chicken gets the most severe form of infectious bronchitis?

What test result will differentiate IBV infection from avian influenza & Newcastle disease?

List 3 common findings on necropsy of an adult laying hen with infectious bronchitis.