Health Management in Poultry

Avian influenza (Fowl plague, highly pathogenic avian influenza (HPAI))

- Avian influenza is a viral disease of several avian species in various parts of the world. The disease can range from asymptomatic and mild to hyperacute and fatal. Avian influenza occurs infrequently in *humans*. It is seen as an occupational hazard, primarily to those associated with varied activities in the poultry industry; employees in abattoirs, vaccinators, laboratory staff and other personnel. In most cases the clinical picture is that of *conjunctivitis* with rare systemic reactions. Avian influenza is reportable disease in many countries. It has to be confirmed by virus isolation.
- **Transmission**: Secretions from infected birds, by wild birds and contaminated feed, equipment and people. Seabirds and migratory waterfowl comprise the main reservoir for avian influenza virus.

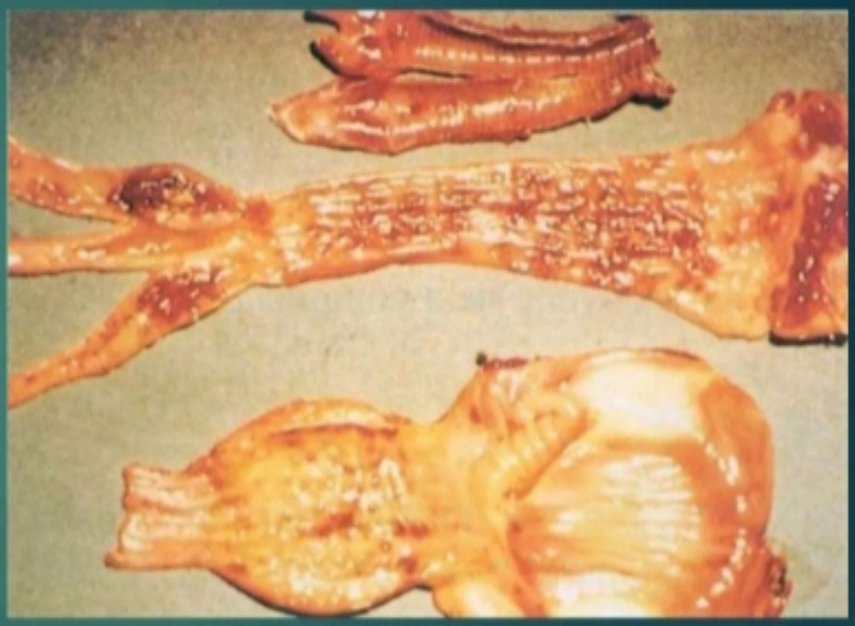
Edematous, cyanotic comb and wattles of a chicken.

Bloody cloaca and dark coloured skin of a chicken died of AI

Velogenic Viscerotropic Newcastle disease (VVND)

- NCD is in its chronic form an infection of domestic fowl with symptoms such as rejection of food, listlessness, abnormal breathing, discharge from eyes and greenish diarrhoea. Mortality in chicken is 50 – 80 %, but in adults much lower due to available vaccination. VVND is an acute, fatal infection of birds of all ages with predominant haemorrhagic lesions of the gastrointestinal tract, severe depression, and death prior to clinical manifestations. This disease is caused by the *most virulent strain of the Newcastle disease virus*. The virus of VVND is very resistant and remains viable at extreme pH and temperature ranges, and may remain viable in the bone marrow of poultry carcasses for weeks.
- Transmission : Transmission is by direct contact, fomites, and by aerosols through coughing, gasping and respiratory fluids. The virus has a wind borne potential for spread creating quite a challenge for control and prevention. Faeces and insect and rodent vectors are also involved in the transmission.

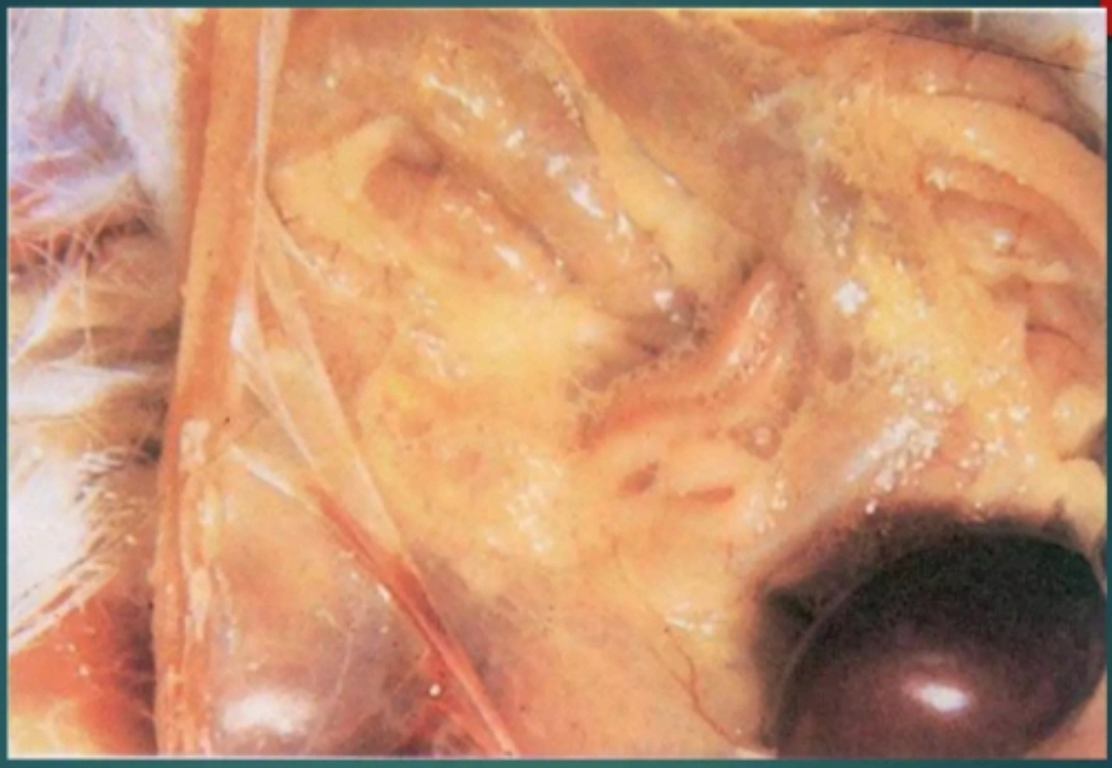
Swelling of the lower eyelid and conjunctivitis



Haemorrhage in the mucosa

Infectious bronchitis (IB)

- Infectious bronchitis is an acute, highly contagious viral disease of chickens, manifested by respiratory signs, renal disease and a significant drop in egg production.
- **Transmission** : Airborne transmission in the direction of prevailing wind. The spread of infection is rapid in a flock. Some birds become carriers and shedders of the virus through secretions and discharges for many months after the infection. IB virus persists in contaminated chicken houses for approximately four weeks.



IB. Abdominal airsac containing yellowish caseous exudate.

Laryngotracheitis (LT)

- LT is an acute viral disease of chicken characterized by difficult breathing, gasping and coughing up of bloody exudate.
- **Transmission**: Virus entry in LT is via the respiratory route and the intraocular route. Oral infection may also occur. The transmission from acutely infected birds is more common than from recovered or vaccinated birds. The latter may shed the virus for a prolonged period of time. Mechanical transmission via fomites is another possibility.

Difficult breathing and coughing

Fowl Pox (FP, Pox, Avian Pox)

- Fowl Pox is a viral disease of chicken, turkeys and other birds distinguished by cutaneous lesions on the head, neck, legs and feet. It has a worldwide distribution and affects birds of all age groups, except the recently hatched.
- **Transmission** : The virus is present in lesions and in desquamated scabs. It is resistant to environmental factors and persists in the environment for many months. It usually infects birds through minor abrasions. Mechanical transmission occurs by cannibalism. Some mosquitoes can transmit the virus from infected to uninfected birds. The virus can be also transmitted by injury to the skin.

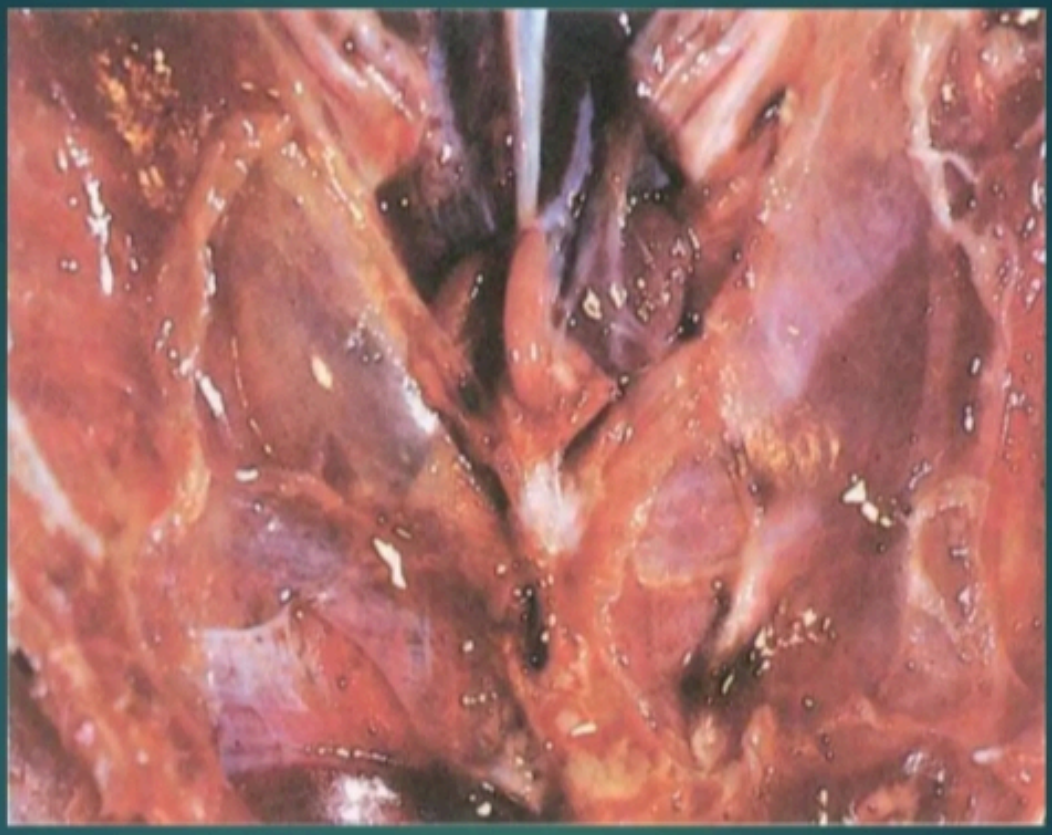
Fowl cholera (Pasteurellosis)

- Fowl cholera is an infectious disease affecting almost all classes of fowl and other poultry. The disease is more prevalent in turkeys than in chicken. It occurs more frequently in stressed birds associated with parasitism, malnutrition, poor sanitation and other conditions. Fowl cholera is caused by *Pasteurella multocida*. This organism is easily destroyed by sunlight, heat, drying and most of the disinfectants. However, it will survive several days of storage or transportation in a humid environment. It persists for months in decaying carcasses and in moist soil. The agent is frequently carried in the oral cavity of wild and domestic animals.
- **Transmission** : If birds are bitten by infected animals such as rodents and carnivores, the disease could be disseminated in the flock. Contaminated feed, water, soil and equipment are also considered as potential factors in the spreading of the disease.

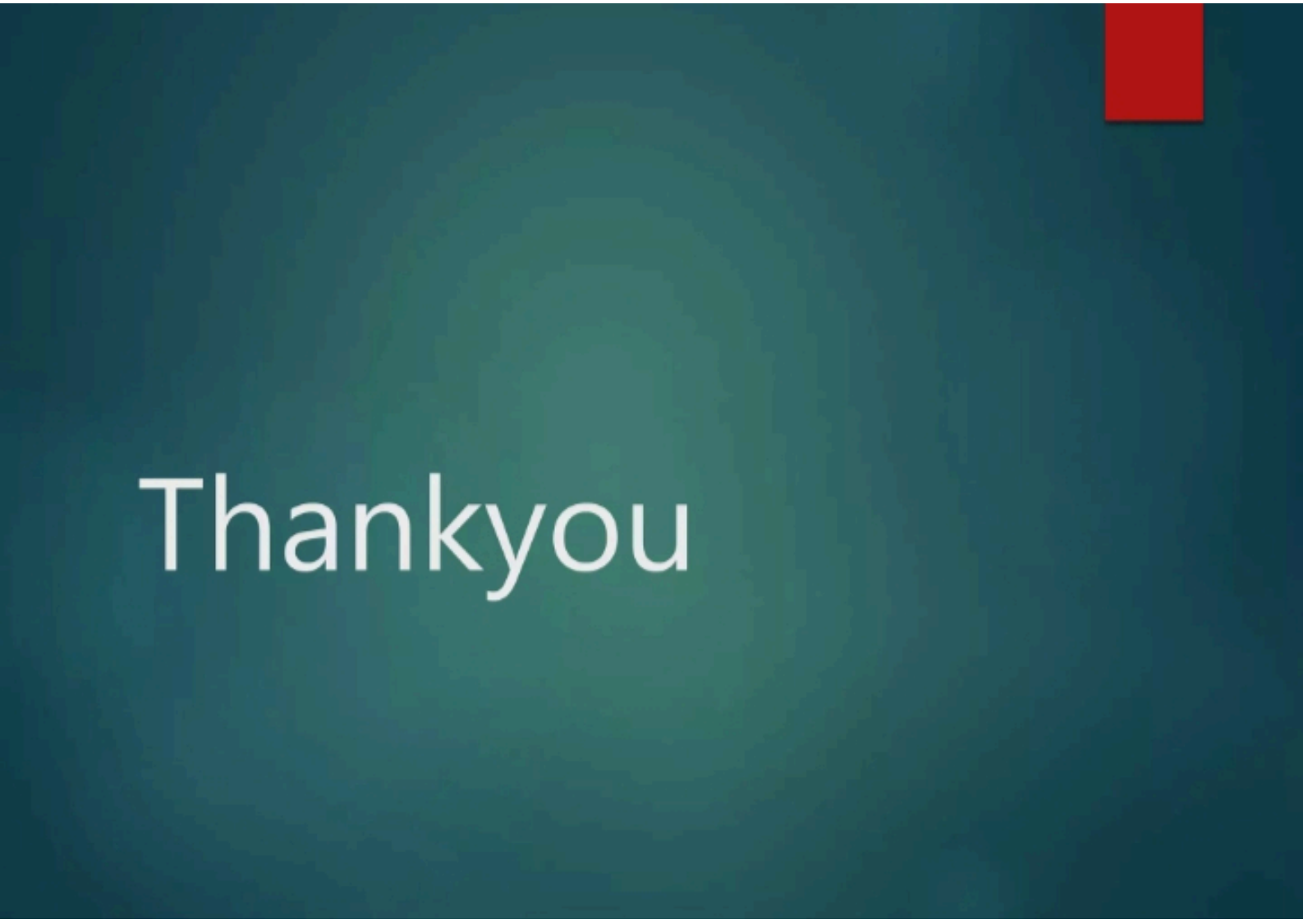
Fowl cholera. Cheesy exudate in the Infraorbital Sinus

"Air sac disease" and Chronic Respiratory Disease (CRD)

- The term "Air sac disease" usually refers to a respiratory syndrome characterized by airsacculitis, perihepatitis and pericarditis in broiler chickens between 4 – 8 weeks of age. Pneumonia is also frequently present. Primary factors associated with the etiology of air sac disease are poor air quality and dust, associated with either *viral or mycoplasmal agents. E. coli* is usually a secondary invader.
- Chronic respiratory disease (CRD) refers to respiratory infection of the upper respiratory tract of chicken caused by *Mycoplasma gallisepticum*. This agent affects turkeys more severely and causes infectious sinusitis.



Chronic Respiratory Disease. Cloudy appearance of the abdominal airsacs in this 7 week old chicken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