Avian Streptococcosis

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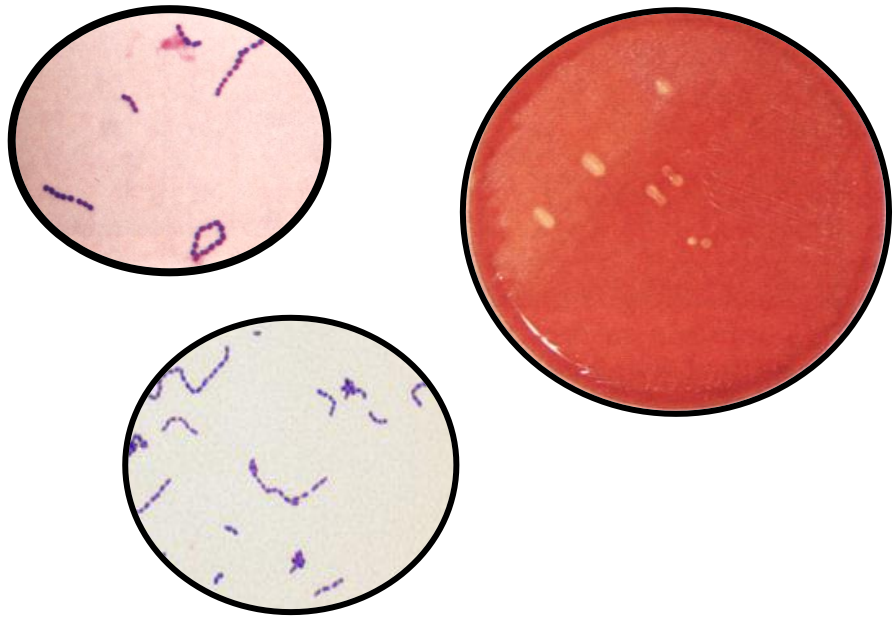
Streptococcosis

It is an infectious disease affect birds of any ages but more severe in embryos, young chicks and poults producing acute septicemia or chronic infection. Omphalitis is frequently occurring in young ages.

Etiology:

- *Streptococcus zooepidemicus* is a Gram-positive cocci, arranged in chains, non-motile, non-spore forming and facultative anaerobe.
- Catalase positive and sugar fermenter bacteria.
- It can grow on MacConky's agar.
- Classified as lancefield's group C.



Mode of infection and transmission:

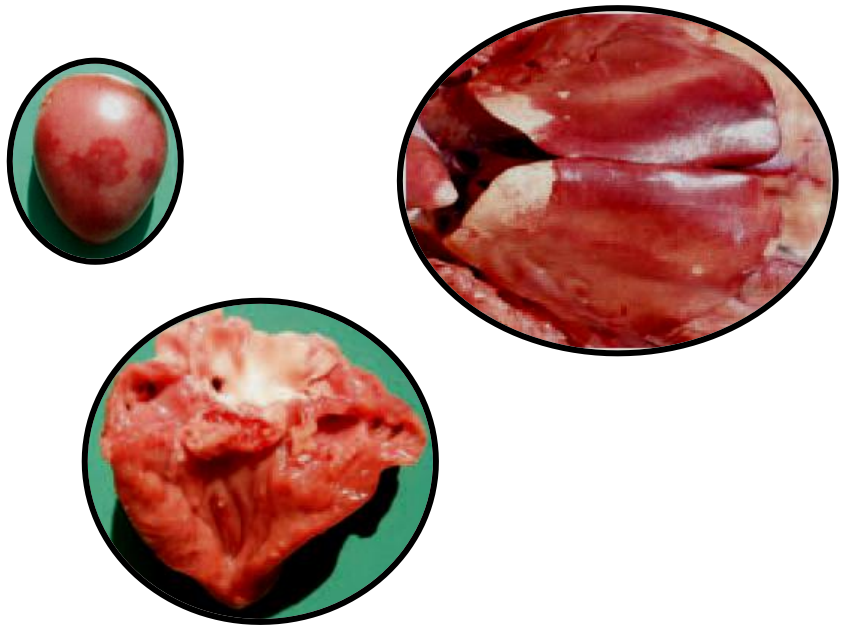
- It is an intestinal inhabitant of birds and mammal's.
- Spread is direct through the eggs or indirectly by oral, respiratory routes and may be through skin wounds.
- Stress factors influence the disease occurrence.

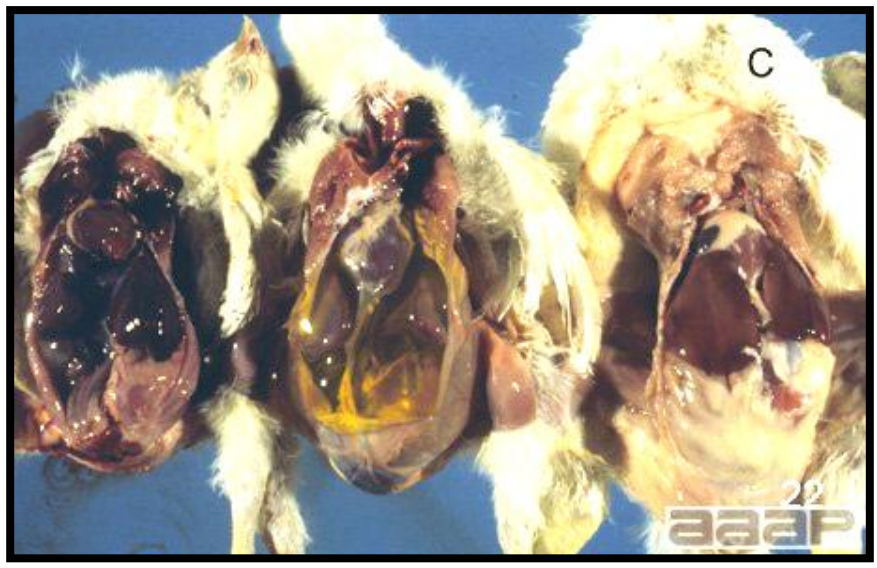
Clinical signs

- **Acute form**
  - Sudden death.
  - Depression and ruffled feathers.
  - Cyanosis of comb and wattles.
  - Yellowish diarrhea and loss of body weight.
  - Blood stained nasal exudates.
  - Mortality may vary and reach 50%.
  - At egg hatcheries, there are late embryonic mortalities and reduced hatchability.
- **Chronic form**
  - Progressive loss of conditions, diarrhea, lameness, head tremors and torticollis.

Gross lesions

- **In acute disease:**
  - Splenomegaly, hepatomegaly (with or without necrotic foci, enlarged kidneys, congestion of subcutaneous tissue, and peritonitis.
  - Liver and spleen necrosis and infarction.
  - Subcutaneous and pericardial fluid may appear serosanguineous.
  - Bloodstained feathers around the mouth and head with blood coming from the mouth may occur.
  - In broilers, cellulitis involving the skin and subcutaneous tissues can be observed at processing (should be differentiated from E. coli cellulitis).
- **Chronic streptococcal infections:**
  - Fibrinous arthritis and/or tenosynovitis, osteomyelitis, salpingitis, fibrinous pericarditis, necrotic myocarditis, and valvular endocarditis.
  - Vegetative valvular lesions are usually yellow, white, or tan small, raised rough areas on the valvular surface.
  - Misshapen ova, perihepatitis and pneumonia.
  - Mild ascitis.

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Diagnosis

- Demonstration of bacteria typical of streptococci in blood films or impression smears of affected heart valves or lesions from birds with typical signs and lesions allows a presumptive diagnosis of streptococcosis.
- Clinical signs and lesions.
- Isolation, identification, and biochemical testing. Bacterial endocarditis can be diagnosed based on valvular vegetations with secondary infarcts of myocardium, liver, and/or spleen. In suspected cases, it is important to culture lesions to establish a definitive diagnosis and rule out other bacteria.
- A rapid detection test by latex agglutination has been described for identification of antigenic serogroup C streptococci in animals.

Latex agglutination test

Differential diagnosis

Includes other bacterial septicemic diseases, eg, staphylococcosis, enterococcosis, colibacillosis, pasteurellosis, and erysipelas.

Control

- Sanitation and sound management.
- Hatchery management.
- *In-vitro* sensitivity test is necessary before treatment.
- Treatment includes use of antibiotics such as penicillin, erythromycin, novobiocin, oxytetracycline, chlortetracycline, and tetracycline in acute and subacute infections.