Veterinary Science
Preparatory Training for the Veterinary Assistant
Floron C. Faries, Jr., DVM, MS
Infectious Diseases:
Cardiovascular & Lymphatic Systems

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Objectives

- Discuss some of the infections viruses can cause in the cardiovascular system
- Discuss some of the infections bacteria can cause in the cardiovascular system
- Discuss some of the infections hemoparasites can cause in the cardiovascular system
- Discuss some of the infections rickettsiae can cause in the cardiovascular system
- Discuss some of the infections bacteria can cause in the lymphatic system
Heart and Blood Vessels

- **Myocarditis** – inflammation of heart muscle (myocardium)
- **Endocarditis** – inflammation of the heart lining (endothelium) and valves
- **Pericarditis** – inflammation of the heart sac (pericardium).
- **Arteritis** – inflammation of arteries
- **Phlebitis** – inflammation of veins
Heart and Blood Vascular Diseases

- Causative agents
  - Bacteria – close contact and environment
    - Streptococcus
    - Staphylococcus
    - Salmonella
    - Clostridium
    - Borrelia
    - Actinobacillus
    - Actinomyces
Viruses – close contact

- Parvovirus
- Encephalovirus
- Hepatovirus
- Lymphovirus
- Pneumovirus
- Hemovirus
Hemoparasites – arthropod vectors

- Dogs – trypanosome – kissing bugs
- Dogs and cats – dirofilaria – mosquitoes
Diagnosis
- Physical examination
- Digital imagery
- Blood tests
Blood Cells

- Anemia – RBC number, volume, or hemoglobin reduction

- Icterus – bile pigments in skin and mucous membranes (jaundice, yellow)

- Ascites – fluid accumulation in peritoneal cavity

- Edema – fluid accumulation in tissues
Viral Blood Cell Diseases

- Transmitted by vectors and vehicles
- Horses – equine infectious anemia (EIA, swamp fever)
- Cattle – bluetongue
- Cattle – leukosis
- Fever, anemia, jaundice, weight loss, and abortion

- Laboratory procedures are serological tests
Rickettsial Blood Cell Diseases

- Cattle – anaplasmosis (anaplas)
  - Transmitted by horseflies, deerflies, ticks, and instruments

- Swine – eperythrozoonosis (Epe)
  - Transmitted by sucking lice and instruments
Dogs – ehrlichiosis (Tick Fever)
- Transmitted by brown dog tick, instruments, and blood transfusion

Dogs – Rocky Mountain spotted fever (RMSF, Tick Fever)
- Transmitted by American dog tick, instruments, and blood transfusion
Horses – ehrlichiosis (Potomac Horse Fever)
- Transmission is unknown

Laboratory procedures are blood tests
Lymph Nodes and Lymph Vessels

- **Lymphadenitis** – bacterial inflammation of lymph nodes
- **Purulent lymphadenitis** – bacterial inflammation of lymph nodes with pus (abscess)
  - **Caseous pus** – pasty to cheesy in consistency
- **Lymphangitis** – bacterial inflammation of lymph vessels
Bacterial Lymph Node and Vascular Diseases

- Transmitted by direct contact and environment
- Sheep – caseous lymphadenitis (CL)
- Goats – caseous lymphadenitis (CL)
- Pigs – streptococcal lymphadenitis (jowl abscess)
- Horses – ulcerative lymphangitis (pigeon breast)
- Horses – streptococcal lymphadenitis (strangles, distemper)
- Laboratory procedures are bacterial cultures of lymph node exudate (pus)