

# **Respiratory System diseases**

## **Rhinitis**

**(runny nose)**

# Rhinitis (runny nose)

- **Rhinitis** is the term applied to an infection or inflammation of the nose characterized clinically by sneezing and nasal discharge . If the sinuses are also involved, it is called **sinusitis**

# Etiology

- Bacteria such as
  - Staphylococcus and
  - Streptococcus
- viruses such as
  - parainfluenza, adenovirus,
  - canine distemper and
  - herpes

# Clinical Signs

1. **excessive nasal discharge**, occasionally becoming a thick yellow or greenish-colored mucous.
2. The dog may **sneeze** frequently, trying to clear the nasal passages of mucous.
3. In advanced cases, the mucous may become bloody.
4. The dog's **sense of smell is usually impaired**, which may affect its appetite

# Dried nasal discharge - rhinitis



# Unilateral mucopurulent nasal discharge



# Diagnosis

- Case History
- Clinical Signs

# Treatment

1. 1- Hygienic treatment
  1. Complete rest
  2. Isolation from other pets to minimize the spread
2. 2- Medicated
  1. Antibiotic based on culture and sensitivity
    1. amoxicillin
    2. Keflex
  2. Antihistamininc such as avil
  3. Vaporizer to facilitate breathing



# **Diseases of Respiratory System**

## **Pneumonia**

# **Definition:**

**Inflammation of the lung tissue that usually preceded by  
bronchitis (bronchopneumonia)**

**It is characterized clinically by fever, coughing and  
Dyspnea**

# **Etiology**

## **I- Predisposing factors**

Environmental exposure to dusts, smoke and

## **II- secondary to heart diseases (Heart Failure)**

## **III- *Aspiration Pneumonia***

*Secondary to megaesophagus*

# IV- Infectious causes

## 1. Fungal Pneumonia

1. *Coccidioidomycosis immitis*,
2. *Cryptococcus neoformans*

## 2. Viral Pneumonia

1. canine distemper virus infection or
2. a complicated feline upper respiratory infection

## 3. Parasitic Pneumonia

1. lungworms (paragonimus spp. Aelurostrongylus)
2. from the migration of other worms through the lung (Toxocara)

## 4. Bacterial Pneumonia

1. secondary to severe kennel cough particularly in young puppies

## 5. Allergic Pneumonia

# Clinical signs

1. Rapid breathing (**tachypnea**)
2. Respiratory distress (**Dyspnea**)
3. **Productive cough** (Coughing is frequent, painful and, in the final stages, they can be produced by such severe paroxysms that the animal becomes exhausted rapidly)
4. **Fever** (40 -41 C) and Depression
5. **Mucopurulent** nasal discharge
6. Anorexia
7. Listlessness (laziness)
8. weight loss, activity or exercise intolerance
9. The tongue, gums, and lips may appear bluish (**cyanosis**)
10. Lung sounds are often abnormal with a “**crackle**” upon auscultation when the dog takes a deep breath

# Coughing



Photo: Jane Burton

# Diagnosis

- Case History
- Clinical signs
- Lab Exam
  - Complete blood count (CBC)
  - Airway cytology
  - Culture (tracheal wash cytology and culture and sensitivity)
- Chest X-rays
- Bronchoscopy

# Treatment

## I- Hygienic Treatment

- Plenty of fluids and warmth
- Rest

## II- Medicated Treatment

1. Antibiotics for at least three weeks or longer
2. Humidified oxygen for animals that have trouble breathing
3. Airway humidification to assist in expectoration of secretions
4. Percussion of the thorax (coupage) to help loosen and remove secretions
5. Expectorants
6. Bronchodilator therapy
7. Cough suppressants



**CHYLOTHORAX**

# CHYLOTHORAX

- **Definition**

It is accumulation of **lymph** in the pleural sac due to **rupture of the thoracic duct**. The lymph fluid contains high concentration of triglycerides, **lymphocytes**, protein, fat-soluble vitamins.

# Etiology

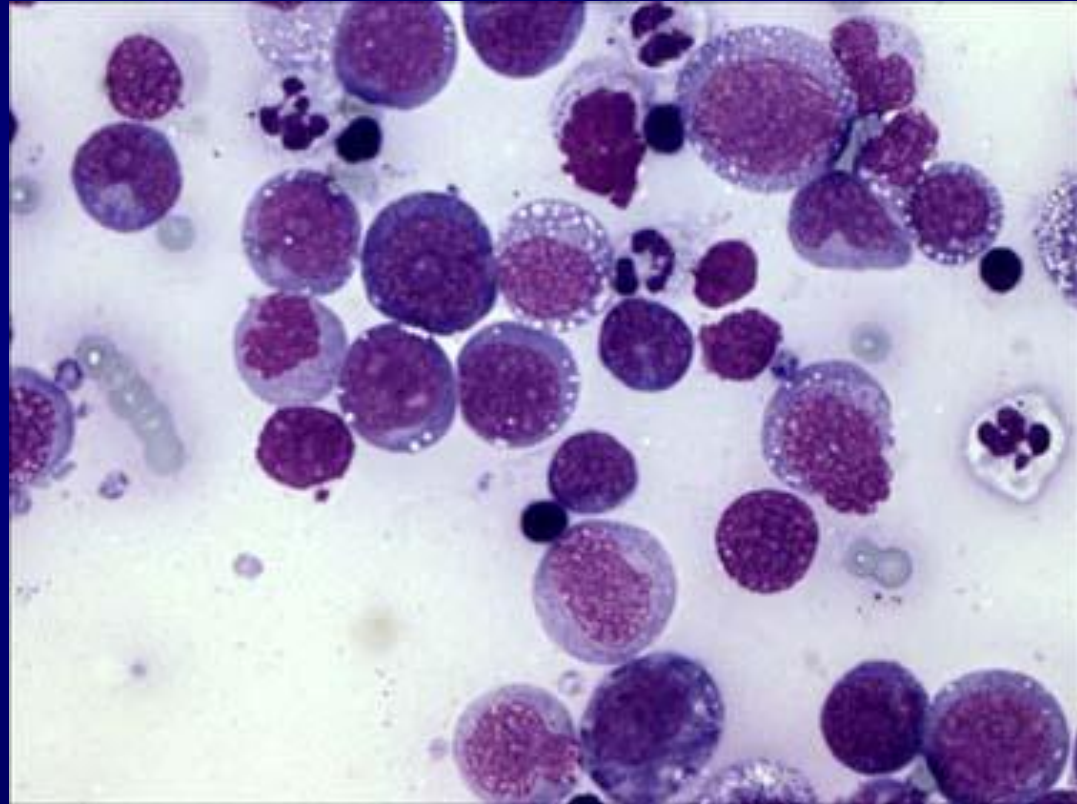
- Rupture of thoracic duct due to
  - Congenital disorder.
  - Surgical trauma during thoracotomy.
  - Non-surgical trauma by car accident.
  - Neoplasia in cats is a common cause.

# Clinical signs

1. Respiratory distress especially during inspiration.
2. Anorexia, weight loss
3. Exercise intolerance.
4. Cough may occur.

# Diagnosis

1. History
2. Clinical signs.
3. Radiography. To document the fluid
4. Examination of pleural fluid collected by thoracocentesis
5. Blood test: **lymphopenia** and **panhypoproteinemia** in peripheral blood



**Large number of small lymphocytes in pleural fluid**

# Treatment

## A-Hygienic Treatment

- Rest
- Fluid therapy

**B-Medicated therapy:** by **draining** the chyle by chest tube using a constant suction. This drainage may maintain direct contact between the parietal and visceral pleura that may decrease leakage of chyle from the chest.

**C- Surgical: ligation** of the **thoracic duct**, a procedure best performed when combined with imaging studies (contrast lymphangiography) to outline the duct and all of its channels

# Questions

