

Diseases of Respiratory System

Pneumonia

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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

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

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
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

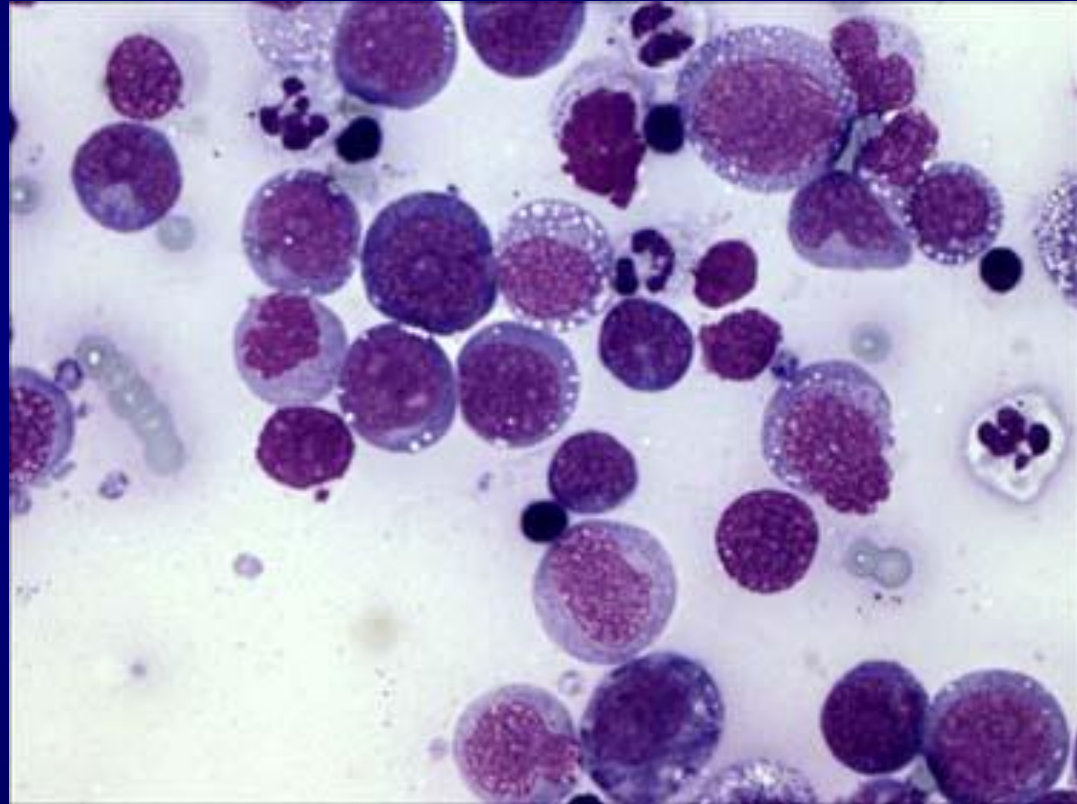
- Rupture of thoracic duct due to
 - Congenital disorder.
 - Surgical trauma during thoracotomy.
 - Non-surgical trauma by car accident.
 - Neoplasia in cats is a common cause.

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

