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Pyothorax in Cats

What is pyothorax?

Pyothorax refers to the presence of inflammatory fluid or "pus" within the chest cavity, which is the area between the lungs and the inner walls of the chest.

What causes pyothorax?

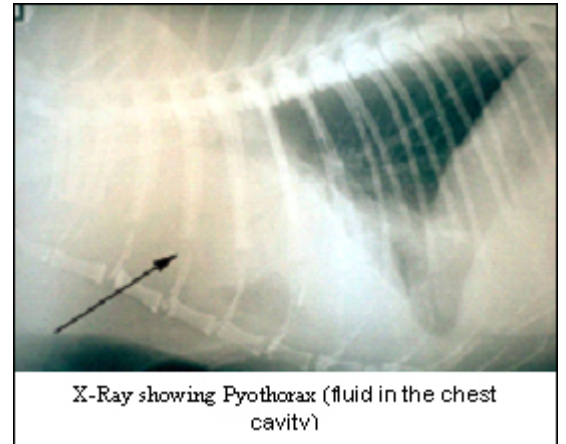
Pyothorax can be caused by any infectious agent (e.g., fungi) but is usually caused by a bacterial infection in the chest cavity. In most cases, pus is present in both sides of the chest although occasionally only one side will be affected.

The source of the infection is rarely found although possible causes include:

1. Penetrating wounds of the chest wall.
2. Wounds to internal structures such as the esophagus or trachea (windpipe), especially following ingestion or inhalation of a foreign object.
3. A migrating foreign body such as a grass seed that entered the body elsewhere.
4. Spread of an infection from the lungs.
5. Spread of upper respiratory infection especially in multi-cat households

What are the clinical signs of pyothorax?

Rapid shallow breathing that may be painful, lethargy, tendency to hide, decreased appetite and other signs of illness are seen in most cats with pyothorax. These cats usually have a high temperature that contributes to some of the clinical signs. The rapid, open-mouth breathing or "breathlessness" is caused by the presence of fluid in the chest that prevents the lungs from expanding normally. The severity of these signs is extremely variable and cats may die suddenly without having had any previous signs of illness



How is pyothorax diagnosed?

Clinical examination by a veterinarian may provide some indication of fluid within the chest particularly on listening to the chest with a stethoscope. Chest radiographs (x-rays) or ultrasound when available will be performed to confirm the presence and location of fluid in the chest. Confirmation that the fluid is "pus" will require the fluid to be drained from the chest (a procedure called a thoracocentesis or "chest tap") and sent to a laboratory for evaluation and bacterial culture. Bacterial culture is essential so that the organism responsible can be identified and appropriate antibiotics given. In pets with severe respiratory distress, a chest tap may be performed before x-rays to ease the work of breathing. In almost all cases a mild sedative must be given to the pet to allow drainage of the chest. In some cases, the pus can be drained from one side, although sometimes, the fluid is present in "pockets" and multiple drainage procedures must be performed.

In cases of pyothorax where no obvious cause is determined, it is recommended that the cat be tested for Feline Leukemia (FeLV) and Feline Immunodeficiency Virus (FIV).

How is pyothorax treated?



Drainage of the infected fluid plays an important part in the treatment of this condition.

"Drainage may be needed on multiple occasions during the initial treatment period."

Drainage is required in all cases of pyothorax to reduce the bacterial load as well as to relieve the patient's clinical signs. In most cases, a flexible catheter (e.g., chest tube) will be inserted into the chest to allow continued fluid removal and "lavage" (flushing out the chest). The drain may be left in place for several days to allow these procedures to be repeated.

Treatment with antibiotics is also essential and the cat will need to stay on these for several weeks. Most cats require 3–5 days of IV antibiotics and in-hospital supportive treatment before discharge home on oral antibiotics.

Medical management with antibiotics and drainage will be ineffective in certain patients. Surgery is required in patients who fail a week of medical management or who fulfill the following criteria

- 1 – Confirmation of a foreign body within the chest
- 2 – Presence of an abscess or mass in the lungs or chest
- 3 – Isolation of Actinomyces bacteria on culture

What is the long-term outlook for a cat with pyothorax?

Treatment is successful in over 85% of cases where chest drainage and early appropriate antibiotics are administered. Even very sick cats have a good chance of success with aggressive IV support and surgery under the care of a 24hr specialty hospital.

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